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GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd. Copyright

- protein search, using sw model OM protein April 22, 2004, 17:51:09; Search time 50.1316 Seconds (without alignments) 2147.361 Million cell updates/sec Run on:

Title: Perfect :

US-09-495-448A-4 2116 score:

1 MSSRIARALALVVTLLHLTR......ANEAAFPFYRLFNDIHKFRD 381 BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table: Sequence:

1586107 segs, 282547505 residues

Total number of hits satisfying chosen parameters: Searched:

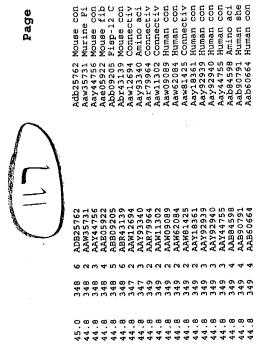
seq length: 0 seq length: 200000000 Minimum DB Maximum DB Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

A Geneseq 29Jan04:* Database

geneseqp2001s:* geneseqp2002s:* geneseqp2003as:* geneseqp2003bs:* geneseqp1980s:* geneseqp1990s:* geneseqp2000s:* geneseqp2004s: Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| | Description | Aaw35730 Human cys | 1 Human | 7 Human | Aab90773 Human she | 61 Human | 8 Нишап | 01 | a | _ | 7 | 0 Prost | N | 9 Connec | Aay31620 Human CTG | Ф. | Abu63223 Human con | Aar25565 Beta-IG-M | Aae05920 Mouse cys | Abb09201 Mouse cyr | _ | Abb09203 Chicken c | Abr43138 Rat conne | 79 Rat | Aar25566 Beta-IG-M |
|---|---------------|----------------------------|----------|----------|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------|----------|--------------------|--------------------|--------------------|--------------------|----------|--------------------|--------------------|----------|--------------------|
| | ID | AAW35730 | AAE05921 | AAW35957 | AAB90773 | AAU79761 | ABB05438 | AAE18107 | ABU63222 | AAB43987 | ABG76937 | ADB75260 | ABB09202 | AAR90919 | AAY31620 | AAE18108 | ABU63223 | AAR25565 | AAE05920 | ABB09201 | AAE05939 | ABB09203 | ABR43138 | AAY24379 | AAR25566 |
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| | Score | 2116 | 2116 | 2106 | 2106 | 2106 | 2106 | 2106 | 2106 | 0 | 2098 | 6 | 1971.5 | 971. | 971. | 971. | 1971.5 | 1929 | 1929 | 1929 | 1695 | 1695 | 955 | 953 | 057 |
| | Result No. | ; ; ; ; ; ; | . 71 | ı | 4 | S | 9 | 7 | 00 | o | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 6 | 20 | 21 | 22 | 23 | 24 |



99522. 99489. 9489. 9489. 9489. 9449. 9447. 9449. 9447.

947

ALIGNMENTS

AAW35730 standard; protein; 381 AA.

AAW35730;

(first entry) 27-MAR-1998 Human cysteine rich protein 61 (Cyr61).

Cysteine rich protein 61; Cyr61; human; extracellular matrix signalling molecule; cell adhesion; cell migration; cell proliferation; angiogenesis; chondrogenesis; oncogenesis; haematostasis; wound healing; organ regeneration.

Homo sapiens.

WO9733995-A2

18-SEP-1997.

97WO-US004193. 14-MAR-1997; 96US-0013958P. 15-MAR-1996;

(MUNI-) MUNIN CORP.

Lau LF;

WPI; 1997-470875/43. N-PSDB; AAT94699.

Isolated and purified cysteine rich protein 61, Cyr61 - useful to modulate e.g. haematostasis, induce wound healing, promote organ regeneration etc.

Claim 2; Page 112-113; 133pp; English.

This protein sequence comprises human cysteine rich protein 61 (Cyr61), an extracellular matrix signalling molecule. Its amino acid sequence was deduced from a human placental cDNA clone (see AAT94699). Cyr61 polypeptides can be expressed in transformed or transfected host cells. Cyr61 can be used to modulate heamatostasis, induce wound healing in a tissue, promote organ regeneration, improve tissue grafting or promote for a modulator of angiogenesis, chondrogenesis, oncogenesis, cell adhesion, cell migration, cell proliferation, expand a population of undifferentiated haematopoietic stem cells in culture and to screen for a

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The invention relates to extracellular matrix (ECM) signalling molecules involved in cellular response to growth factors. More particularly the involved in cellular response to growth factors. More particularly the involution is directed to cysteine-rich protein (Cyrél), and Cyrél-related proteins such as fibroblast secreted protein (Fispl2) and connective tissue growth factor (CTGF) and nucleic acid molecules encoding such proteins. The polypeptides of the invention are members of cysteine-rich secreted protein family. Human Cyrél fragment is useful in methods for screening modulators of cell adhesion, cell migration, fibroblast cell prolateration, angiogenesis, wound healing and Cyrél-integrin receptor interaction. Modulator of Cyrél-integrin alphaVbeta3 interaction is used for the preparation of a medicament for the treatment of atherosclerosis, heart disease, tumour metastasis, fibrosis, tumour growth, disorders associated with inadequate angiogenesis; aberrant granulation tissue development; aberrant fibroblast growth and wounds. Polymucleotides of the invention are useful in gene therapy. The present sequence is human
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                                                                                                                                                                                 Novel human cysteine-rich protein 61 (Cyr61) fragment useful in methods for screening for modulators of cell adhesion, fibroblast cell proliferation, angiogenesis and cell migration.
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100.0%; Pred. No. 8.9e-162;
ive 0; Mismatches 0;
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mitogen (claimed). Ex vivo methods for using mammalian extracellular matrix signalling molecules to prepare blood products are also provided
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/note= "Cysteine free re
212. .281
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282. .381
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Length 381; Indels 300

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ö The present sequence represents a monocyte mature differentiation factor (MMDF) which maintains the life of macrophages for long periods in liquid culture. MMDF can be used as an anti-cancer agent, an immune activator and to treat infectious diseases 120 120 9 1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFOPNCQHQ Gaps Human; monocyte; mature; differentiation factor; MMDF; macrophage; cancer; immune activator; tissue culture; infectious disease. - useful for the long . 0 Length 381; Indels Query Match
99.5%; Score 2106; DB 2;
Best Local Similarity 99.5%; Pred. No. 5.6e-161;
Matches 379; Conservative 1; Mismatches 1; Human monocyte mature differentiation factor. A monocyte mature differentiation factor tissue culture of macrophage(s). Claim 9; Page 12-13; 22pp; Japanese. 96JP-00075236. 96JP-00075236. 1997-497320/46. (TOYM) TOYOBO KK. N-PSDB; AAT97142. Sequence 381 AA; JP09234079-A. 04-MAR-1996; 04-MAR-1996; 09-SEP-1997. 61 Ношо a g ਨੇ ò

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                                       CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG
                                                                  KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCS
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241 KTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTY 300
                                                                                                                                                                                                                                                                                                                                                                  Human, Cyr61; breast cancer; sex steroid receptor; cytostatic; promoter; sex steroid response element; cysteine rich heparin-binding protein; cell proliferation; heparin binding epidermal growth factor; epidermal growth factor;
                                                          361 HANEAAFPFYRLFNDIHKFRD 381
                                                                                                                              HANEAAFPFYRLFNDIHKFRD 381
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16-MAY-2001; 2001US-0291510P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention relates to a method of inhibiting proliferation of uterine leiomyoma or preventing uterine leiomyoma formation. The method comprises increasing the level of Cyr61 in leiomyoma tissue. The invention also describes compounds and compositions that stimulate induction of the Cyr61 gene and compounds that increase Cyr61 activity. The compositions and the method of the invention are useful for preventing uterine leiomyoma formation or inhibiting proliferation of uterine leiomyoma termine leiomyoma in a subject. The method is particularly useful for treating or preventing uterine leiomyoma in a subject. The present sequence represents human Cyr61. Note: The present sequence represents human Cyr61. Note: The present sequence sequence order in the figure. The start of the sequence is shown on page 8/10 of the figures and the rest of the
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Cyr51; cytostatic.
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Pred. No. 5.6e-161;
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   AAU79761 standard; protein; 381 AA
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Matches 379; Conservative
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N-PSDB; ABK48899.
                                                                                                       Human Cyr61 protein
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The present invention describes a method for the prevention or inhibition of breast cancer cell proliferation. The method comprises administration of breast cancer cell proliferation. The method comprises administration of a compound that inhibits the interaction of a sex steroid receptor with a sex steroid response element of the Cyfel (cysteine rich heparinbinding protein) promoter. Cyfel has cytostatic activity. An antibody (I) which neutralises Cyfel can be used to prevent or inhibit breast cancer cell proliferation by blocking sex steroid induced and growth factor in equivalently in the cancer cell proliferation by blocking sex steroid induced and growth factor is epidermal, consent begin by a stage breast cancer where the level of Cyfel in a possitive/suspect breast cancer where the level in ormal costive/suspect breast cancer cell is compared to the level in normal tissue indicates the presence of breast cancer. The level of Cyfel being determined by exposing the tissues to (I), and an increase in the level coff breast cancer. The level of cyfel being the tissue indicates the presence of breast cancer. The present sequence represents the human Cyfel protein, which is used in the exemplification coff the present invention
                                                                                                                                                                                                                                    Regulation of Cyr61 expression and activity for preventing and inhibiting breast cancer comprises use of a Cyr61 neutralizing antibody, an antisense oligonucleotide and an antibody which.
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Pred. No. 5.6e-161;
Winneker R;
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N-PSDB; ABA93127, ABA93130.
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                                                                                                     CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG
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                                  MSSRIARALALVVTLIHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                     NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQ
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The present invention relates to a method for stimulating angiogenesis in a mammal. The method comprises administering a polynucleotide encoding connective tissue growth factor-2 (CTGP-2) or an active fragment or its derivative. The method is useful for stimulating angiogenesis in a mammal preferably human having ischaemia or restenosis or is treated for limb revascularisation which is leg or arm. The invention is useful for inhibiting tumour growth, where angiogenesis is utilised for enhancing the repair of connective and support tissue, promoting the attachment, fixation and stabilisation of tissue implants and enhancing wound healing, hence is useful for treating cardiovascular disease e.g. atherosclerosis, reperfusion injury such as heart failure, angina, atherosclerosis, reperfusion injury such as heart failure, angina, schlaremais, and is also used to differentiate, proliferate and attract cells leading to regeneration of itssues which is utilised to repair replace or protect tissue damaged by congenital defects, trauma (burns, ulce, etc.), age, disease (e.g. osteoprorsis, periodontal disease, liver failure), surgery including cosmetic plastic surgery. The present sequence is human CTGF-2. CTGF-2 gene is useful in gene therapy
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99.5%; Score 2106; DB 5;
Best Local Similarity 99.5%; Pred. No. 5.6e-161;
Matches 379; Conservative 1; Mismatches 1;
                                                                                                                                                                            epitope"
                                                                                                          epitope"
                               "Immunogenic epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fataccioli V;
                                                       318. .323
/note= "Immunogenic
337. .343
                                                                                                                                                                        /note= "Immunogenic
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                                 301 AGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKARFRCEDGETFSKAVMMIQSCKCNYNCP 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New human connective tissue growth factor 2 polypeptides and polynucleotides useful for enhancing repair of connective and support tissues, and for treating skin disorders, e.g. injuries, acne, UV damage or burns, and wrinkled skin.
             AGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKWRFRCEDGETFSKNVMMIQSCKCNYNCP
                                                                                                                                                                                                                                                                                                                Human, connective tissue growth factor 2, CTGF-2; support tissue,
tissue repair; skin disorder, injury, acne, UV damage, burn,
wrinkled skin, tissue implant, vulnerary, antiaging, dermatological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 99.5%; Score 2106; DB 6; Length 381; Best Local Similarity 99.5%; Pred. No. 5.6e-161; Matches 379; Conservative 1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                    Human connective tissue growth factor 2 (CTGF-2) #1.
                                                                            HANEAAFPFYRLFNDIHKFRD 381
                                                                                                                                                                                      ABU63222 standard; protein; 381 AA
                                                                                              HANEAAFPFYRLFNDIHKFRD 381
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N-PSDB; ACD26170.
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                                               NEDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYONGESFOPNCKHO 120
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NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCOHO 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; cancer associated gene; cancer antigen; detection; cancer; diagnosis; cytostatic; proliferative; vulnerary; immunomodulator; antidiabelic; antisthmatic; antirhenmatic; antiartritic; antiviral; antiinflammatic; antiartritic; antiviral; dermatological; neuroprotective; thrombolytic; coagulant; nootropic; vasotropic; antipsoriatic; antianglogenic; gene therapy; inflammation; immune disorder; haematopoietic cell disorder; autoimmune disorder; allergic reaction; graft versus host disease; organ rejection; mannichon; antipsorial dispanse; antipsorial disorder; antipsorial dispanse; anti
                                                                                                                                                                            CTCIDGAVGCIPLCPQELFNIGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG
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                                                                                                                         CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neurological disease; drug screening.
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N-PSDB; AAC78196.
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artidiabetic, antiasthmatic; antiarthritic; antidiabetic, antiasthmatic; antidiabetic, antidiabetic, antidiabetic, antidiabetic; antidiabetic; antidiametory; antidiametory; antipicity in the antidiametory; antipicity is antidiametory; antipicity is coagulant; nootropic; vasotropic; antiporatic and antidiagloganic. The polymucleotides and polypeptides can be used for preventing, treating or members of properting or antibodies, applying pathological conditions. Polymucleotides, polypeptides, antibodies, agonists and antagonists from the present invention may be used to treat immune disorders by activating or inhibiting the proliferation, differentiation or mobilisation of immune cells, to treat disorders of haematopoietic cells, autoimmune cells, to treat disorders of haematopoietic cells, autoimmune rejection, modulate haemostatic or thrombolytic activity, modulate inflammation, cancers, cardiovascular disorders, neurological disease and cancers activity infections. The peptides, nucleotides, antibodies, agonists and antagonists may be also be used in drug screens. AAC78449 to AAC78457 and AAB44240 represent sequences used in the exemplification of
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cytostatic; proliferative; vulnerary; immunomodulator;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.5%; Score 2106; DB 3; Length 455; 99.5%; Pred. No. 7e-161; ive 1; Mismatches 1; Indels
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Matches 379; Conservative
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The invention discloses the isolated human polypeptides, and polymerides encoding them, that have been designated SECX and NOVX. The polymerides can be used for treating, or delaying, the onset of an angiogenic-associated disorder or treating a pathological state in a sugiogenic-associated disorder or treating a pathological state in a sugiogenic-associated disorder or treating a pathological state in a subject, preferably a mammal. They can also be used in determining the presence of, or predisposition to, a disease associated with altered levels of the polypeptides and polymerlectides of any one of the 12 sequences (SEC1-12), for raising antibodies, for identifying an agent that modulates the expression or activity of the polypeptide, for treating or preventing a NOVX-associated disorder (NOVI-8) and as a pharmaceutical composition comprising the polypeptide, polypeptide or the mathiacody. The polypetides and polymerlectides are useful in diagnostic applications where their amounts are assessed, or preventing disorders or syndromes such as developmental disorders, immune diseases, signal transduction pathway disorders, metabolic disorders, neurodegenerative disorders (including Alzheimer's disease and parkinson's disease, cirrhosis (including Alzheimer's disease and parkinson's disease, cirrhosis dispetes, infectious disease (bacterial, fungal, procozoal and viral e.g. human immunodeficiency virus, HIV), cancer (e.g. prostate cancer), hypertension, hypotension, multiple cancers (e.g. arxiely), haemophilia or cirrhosis. They may neurological disorders (e.g. arxiely), haemophilia or cirrhosis. They may have be used as immunogene to produce antibodise specific for the invention and as immunogene to produce antibodise specific for the invention and as immunogene to produce antibodise specific for the invention and as immunogene to produce antibodise specific for the invention and as immunogene to produce antibodise specific for the invention and as immunogene to produce antibodise and contention of the produce an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human SECX/NOVX polypeptide useful for diagnosing, preventing or treating disorders associated with aberrant expression or activity of SECX/NOVX nucleic acids and proteins e.g., diabetes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stone DJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Herrmann JL, Macdougall JR, Zhong H;
Shimkets RA, Gorman L, Crastes OR, Mysore KK;
Y. Eisen A, Spaderna SK, Vernet CAM, Bergh C;
Zerhusen BD, Peyman JA, Ellerman K, Stone I
JP, Lepley DM, Rieger DK, Burgess CE;
                     osteoporosis, Crohn's disease, ulcer, neurological disorder, anxiety, haemophilia, cirrhosis, immunogen, vaccine.
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hypertension; hypotension; multiple sclerosis; urinary retention;
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Pred. No. 2.5e-160;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 3; Page 9; 443pp; English.
                                                                                                                                                                                                                                                               2001US-0261013P.
2001US-0261014P.
2001US-026102BP.
2001US-0261028P.
2001US-0261029P.
2001US-0313170P.
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Best Local Similarity 99.0%;
Matches 377; Conservative
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Martin GB, Bis
Dipippo VA, Zer
Alsobrook JP, I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  (CURA-) CURAGEN CORP.
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N-PSDB; ABS59522.
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Casman SJ, B
Folkerts O, S
Spytek KA, D
Grosse WM, A
                                                                                                                                                                                                                                                                                    11-JAN-2001;
                                                                                          Homo sapiens.
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17-AUG-2001;
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Sequence 381 AA;
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01-APR-1998;
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                           MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSR1YQNGESFQPNCQHO
                                                                                        CTCIDGAVGCIPLCPOELSIPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG
                                                                                                                              KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCS
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                                                                                                                                                                                   KTCGTGISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid molecule, useful for diagnosing or treating prostate
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Anderson D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gannavarapu M,
Glatt K, Zhao X,
                                                                                                                                                                                                                                                                                                                                                                                                            cancer; cytostatic; gene therapy; marker.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; SEQ ID NO 84; 99pp; English.
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, Kamatkar S, Wonsey AM,
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                                                                                                                                                                                                                                                       HANEAAFPFYRLFNDIHKFRD 381
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                                                                                                                                                                                                                                                                   Prostate cancer marker protein.
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2001US-0314356P.
2001US-0325020P.
2001US-0341746P.
2002US-0362158P.
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25-SEP-2001;
12-DEC-2001;
05-MAR-2002;
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Hoersh S,
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patient sample and the normal level of expression of the marker in a control non-prostate cancer sample, where a significant increases in the level of expression of the marker in the patient sample and the normal level indicates that the patient is afflicted with prostate cancer. Nucleic acids of the invention are useful for diagnosing or treating prostate cancer, and may be useful in gene therapy. Sequence given in ABB75177-ADB75631 represent marker cDNA and proteins. Note: The sequence was obtained in electronic format directly from WIPO at fit, pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ
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99.1%; Score 2098; DB 7;
Best Local Similarity 99.0%; Pred. No. 2.5e-160;
Matches 377; Conservative 2; Mismatches 2;
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ADAMS M D.
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Location/Qualifiers

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25-JAN-1996.
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                                                                                                                 The present invention describes human small CCN-like growth factor (SCGF). SCGF has vulnerary and osteopathic activities, and can be used in gene therapy. The SCGF polypeptides and polynucleotides can be used for treating muscle wasting diseases, and osteoporosis, and to stimulate wound healing and tissue regeneration, to promote angiogenesis and to stimulate proliferation of vascular, smooth muscle and endothelial cell production. The present sequence represents a CNN family protein which is given in comparison with the human SCGF in the exemplification of the
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                                                                                                                                                                                                                                                                           1;
                                                    Novel isolated polynucleotide sequence encoding a human small (
growth factor, useful for treating muscle wasting disease, and
                                                                                                                                                                                                                                                      5; Length 374;
                                                                                                                                                                                                                                                                           13; Indels
                                                                                                                                                                                                                                                     Score 1971.5; DB 5
Pred. No. 3.6e-150;
2; Mismatches 13;
                                                                                                Disclosure; Fig 2A-D; 33pp; English.
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                                                                                                                                                                                                                                                      93.28;
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                                                                                                                                                                                                                                                               Best Local Similaria,
Matches 358; Conservative
           Adams MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (revised)
                                WPI; 2002-382150/41
                                                                                                                                                                                                            present invention
                                                                                                                                                                                                                                Sequence 374 AA;
                                                                            osteoporosis.
          Hastings GA,
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25-JUN-1996
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij
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1. .24 //label= signal_peptide 25. .375
                                                                                          25. .375 / label= mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Fig 1A-C; 46pp; English.
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Best Local Similarity 95.7
Matches 358; Conservative
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N-PSDB; AAT12653.
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                                                                                                                                                                                                                                                                                                                                             12-JUL-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence represents human connective tissue growth factor-2 (CTGF-2). CTGF-2 cDNA was isolated from a cDNA library derived from human foetal lung. In one instance, the cDNA was cloned into a baculovirus primers AAZ11721 and AAZ11722. In another instance, the cDNA was cloned into a cOS cell expression vector, with prior amplified via PCR using primers AAZ11721 and AAZ11723 and AAZ11724. CTGF-2 is structurally and functionally related to a family of growth factors which circled IGF (insulin-like growth factor). PDGF (platelet-derived growth factor) and FGF (insulin-like growth factor). This emerging family of systeme-rich secreted proteins are important for normal growth. Cfactor) and FGF (insulin-like growth factor). This emerging family of systeme-rich secreted proteins are important for normal growth. Cfactor) and FGF (insulin-like growth factor). This emerging family of cysteme-rich secreted proteins also include wound healing, tissue repair, implant fixation and stimulating increased bone mass. CTGF-2 may be used to promote the attachment, fixation and stabilization of tissue implants inserted during reconstructive surgery, and can be used to promote the attachment, fixation and stabilization of tissue implants inserted during reconstructive surgery, and can be treatment of injured or depleted bone as it promotes the growth of connective tissue, bone and cementum and stimulates protein and collagen
                                                                                                                      Connective tissue growth factor-2; CTGF-2; wound healing; bone disorder; skin disorder; acne; burn; UV damage; stabilisation; tissue implant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Polynucleotides encoding growth factor polypeptides useful for enhancing the repair of connective tissue and support tissue.
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Pred. No. 3.6e-150;
2; Mismatches 13;
                                                                                                                                                                                                                                                                              note= "Cys encoded by ICT"
                                                                                                                                                                                                                 1. .24
/label= Signal_peptide
                                                                                                                                                                                                  Location/Qualifiers
AAY31620 standard; protein; 375 AA
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Best Local Similarity 95.7%;
Matches 358; Conservative
                                                           (first entry)
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Misc-difference
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                                                                                          Human CTGF-2
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                                                                                                                                                                    Homo sapiens
                                                           02-NOV-1999
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                           AAY31620;
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180
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                                                                                                                                                                                                                                                                                                                                                      The present invention relates to a method for stimulating angiogenesis in
                                               120
                                                                    61 NEDCRKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
                                                                                                                                                                                        239
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; angiogenesis; connective tissue growth factor-2; CTGF-2; tumour; ischaemia; restenosis; tissue repair; wound healing; congenital defect; carditovascular disease; atherosclerosis; heart failure; angina; trauma; burns; osteoporosis; periodontal disease; liver failure; tranquillizer; vulnerary; cosmetic plastic surgery; vasotropic; hepatotropic; ulcer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stimulating angiogenesis in a mammal preferably human having ischemia restenosis or is treated for limb revascularization, by administering connective tissue growth factor-2 polypeptide or polynucleotide.
                                                                                                                    121 CTCIDGAVG-CIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLL
1 MSSRIVRELALVVTLIHITRVGLSTCPADCHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                121 CTCIGWRRGACIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLL
                                                                                                                                                                                                                                                             SKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAE18108 standard; protein; 375
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18-MAY-2001; 2001US-0291642P.
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(TRGE ) TRANSGENE SA.
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a mammal. The method comprises administering a polynucleotide encoding connective tissue growth factor-2 (CTGP-2) or an active fragment or its derivative. The method is useful for stimulating angiogenesis in a mammal preferably human having ischaemia or restenosis or is treated for limb revascularisation which is 19 or arm. The invention is useful for inhibiting tumour growth, where angiogenesis is utilised for enhancing the repair of connective and support tissue, promoting the attachment, fixation and stabilisation of tissue implants and enhancing wound healing, hence is useful for treating cardiovascular disease e.g. atherosclerosis, reperfusion injury such as heart failure, angina, ischeroscie, reperfusion injury such as heart failure, angina, caplace or protect tissue damaged by congenital defects, trauma (burns, cells leading to regeneration of tissues which is utilised to repair replace or protect tissue damaged by congenital defects, trauma (burns, ulcer, etc), age, disease (e.g. osteoporosis, periodontal disease, liver failure), surgery including cosmetic plastic surgery. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121 CTCIGWRRGACIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLL 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 93.2%; Score 1971.5; DB 5; Length 375; Best Local Similarity 95.7%; Pred. No. 3.6e-150; Matches 358; Conservative 2; Mismatches 13; Indels 1;
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Search completed: April 22, 2004, 17:56:33 Job time : 51.1316 secs

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                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09142569
Patent No. 6413735
GENERAL INFORMATION:
GENERAL INFORMATION:
TILLE OF INVENTION: Extracellular Matrix Signalling Molecules NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS: 17
CORRESPONDENCE ADDRESS: 17
STREET: 6300 Sears Tower, 233 South Wacker Drive
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 100.0%; Score 2116; DB 4; Length 381; Best Local Similarity 100.0%; Pred. No. 8.1e-177; Matches 381; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Chicago
STATE: 111inois
COMPUTR: United States of America
COMPUTR: United States of America
COMPUTR: Enlinois
COMPUTR: READABLE FORM:
MEDIUM TYPES FLORPY disk
COMPUTER: BEACHILIN Release #1.0, Version #1.30
COMPUTER: DatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,569
FILING DATE: 02-0491-1999
CLASSIFICATION NUMBER: 36.107
REPERENT INFORMATION:
NAME: Cloudy DATA:
REGISTRATION WUMBER: 36.107
REPERENTS/AGENT INFORMATION:
TELEPRANT STATA A74-6300
TELEFAX: 312/474-6300
TELEFAX: 312/474-6300
TELEFAX: 25-3856
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERSTICS:
            US-08-468-847B-14

US-08-468-847B-16

US-09-253-316-25

US-09-182-145-4

US-09-182-145-7

US-09-182-145-7

US-09-182-145-7

US-09-182-145-7

US-09-182-145-2

US-09-182-145-5

US-09-182-145-5

US-09-182-145-12

US-09-182-145-12

US-09-182-145-12

US-09-182-145-12

US-09-182-145-12

US-09-182-145-12

US-09-182-145-11

US-09-182-145-11

US-09-182-145-31

US-09-182-145-31
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TYPE: amino acid
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 FEATURE
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                                                                                                                                     US-09-495-448A-4
2116
1 MSSRIARALALVVTLIHLTR......ANBAAFPFYRLFNDIHKFRD 381
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/cgn2_6/ptodata/2/laa/6A_COMB.pep:*
/cgn2_6/ptodata/2/laa/6B_COMB.pep:*
/cgn2_6/ptodata/2/laa/PTUS_COMB.pep:*
/cgn2_6/ptodata/2/laa/PTUS_COMB.pep:*
            GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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US-09-348-815-2
US-08-468-815-2
US-08-468-8478-11
US-08-1468-8478-11
US-09-142-569-2
US-09-582-337-2
US-09-582-337-2
US-09-142-569-6
US-09-05-177-2
US-09-05-1779-2
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Maximum Match 100%
Listing first 45 summaries
                                                             protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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length: 2000000000
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Match Length
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Maximum DB
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Perfect
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                                                                                                                                                           61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYONGESFOPNCKHO 120
                                                                                                                                                                                                                          121 CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG 180
1 MSSRIARALALVVTLLHTTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
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| Patent No. 5780263
| GENERAL INFORMATION:
| APPLICANT: Hastnion:
| TITLE OF INVENTION: Human CCN-Like Growth Factor NUMBER OF EQUENCES: 20
| CORRESPONDENCE ADDRESSS:
| ADDRESSEE: CACHI, STEWART & OLSTEIN ADDRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD STREET: NEW JERSEY
| STATE: NEW JERSEY
| COUNTRY: USA
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MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: 1BM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/468,847
FILING DATE: 6 June 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: #35
PRIOR APPLICATION NUMBER:
FILING DATE:
APPLICATION NUMBER:
FILING DATE:
FILIN
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NAME: MULLINS, J.G.
REGISTRATION NUMBER: 33,073
REFERENCE/DOCKET NUMBER: 3258
TELECHONNICATION INFORMATION:
TELEPHONE: 201-994-1700
TELEFRAX: 201-994-1744
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
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US-08-468-847B-12
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TOPOLOGY: L
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   1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
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Pred. No. 6e-176;
1; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: LI, HAODONG
ADAMS, MARK D
TILLE OF INVALION: CONNECTIVE TISSUE GROWTH FACTOR-2
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: HUMAN GENOME SCIENCES, INC.
STREET: 9410 KBY WEST AVENUE
CITY: ROCKVILLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY AGENT INFORMATION:
NAME: JONATHAN L. KLEIN
REGIGTRATION NUMBER: 41,119
REFERENCE/DOCKET NUMBER: PF126P1D1
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-309-8504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/348,815
FILING DATE: 08-01-199
CLASSIFICATION: «Unknown»
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ) TOPOLOGY: linear MOLECULE TYPE: protein ; SEQUENCE DESCRIPTION: SEQ ID NO: 2: US-09-348-815-2
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Patent No. 6534630
GENERAL INFORMATION:
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LENGTH: 381 amino acids
TYPE: amino acid
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Best Local Similarity 99.5%
Matches 379; Conservative
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COUNTRY: US
ZIP: 20850
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Length 374;

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61 NEDCRKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
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                                                                                               Length 375;
                                                                                                                                                                14; Indels
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Fatent No. 5760563
GENERAL INFORMATION:
APPLICANT: Hastings, Gregg A. and Adams, Mark D.
TITLE OF INVENTION:
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILIAN,
STREET: 6 BECKER FARM ROAD
CITY: ROSBLAND
CITY: ROSBLAND
CITY: NEW JERSEY
COUNTRY: USA
                                                                                               Score 1964.5; DB 2
Pred. No. 1.3e-163;
2; Mismatches 14;
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OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERREGT 5.1
CURRENT APPLICATION NUMBER: US/08/468,847B
FILING DATE: 6 June 1995
CLASSIFICATION 435
PRIOR APPLICATION 1435
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INCH DISKETTE
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ATTORNEY/AGENT INFORMATION:
NAME: WULLINS, J.G.
REGISTRATION NUMBER: 33,073
REFERENCE/DOCKET NUMBER: 3258
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1704
                                                                                                   Query Match
Best Local Similarity 95.5%;
Matches 357; Conservative
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
   , MOLECULE TYPE: PROTEIN US-08-459-101A-2
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                                                                                               1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
                                                                                                                                     1 MSSRIVELALVVTLLHLTRVGLSTCPADCHCPLEAPKCAPGVGLVRDGCGCCKVCAKOL 60
                                         1; Gaps
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Patent No. 5945300

GENERAL INFORMATION:

APPLICANT: LI, ET AL.

TITLE OF INVENTION: Connective Tissue Growth Factor-2

NUMBER OF SEQUENCES: 6

CORRESPONDENCE ADDRESS:

ADDRESSE: CARELLA, BYRNE, BAIN, GILFILLAN,

ADDRESSE: CRECHI, STEWART & OLSTEIN

STREET: 6 BECKER FARM ROAD

CITY: ROSELAND

STATE: NEW JERSEY

COUNTRY: USB JE
Best Local Similarity 95.7%; Pred. No. 3.3e-164;
Matches 358; Conservative 2; Mismatches 13; Indels
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MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: 12 S. SINCH DISKETTE
COMPUTER: 12 S. SINCH DISKETTE
COMPUTER: 12 S. SOFTWARE:
COMPUTER: 12 SOFTWARE:
CURRENT APPLICATION DATA:
FILING DATE: June 2, 1995
CLASSIFICATION: 536
RAPLICATION: 536
RAPLICATION NUMBER: PCT/US94/07736
FILING DATE: 12 JUL 94
ATTORNEY, ARGNIT INFORMATION:
NAME: FERRARO, GRECORY D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKT NUMBER: 36,134
REFERENCE/DOCKT NUMBER: 36,134
REFERENCE/DOCKT NUMBER: 36,134
REFERENCE/DOCKT NUMBER: 36,134
TELECHONE: 201-994-1700
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360 PHANEAAFPFYRLF 373
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61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCOHO
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                                                                                                                                                                                                                                                                                                                                                                         1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                   NAME/KEY: misc feature OTHER INFORMATION: "Mouse Cyr61 amino acid sequence" SEQUENCE DESCRIPTION: SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                       Length 379;
                                                                                                                                                                                                                                                                                                                        Indels
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Patent No. 5780263
GENERAL INFORMATION:
APPLICANT: Hastings, Gregg A. and Adams, Mark D. TITLE OF INVENTION: Human CCN-Like Growth Factor NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                    91.2%; Score 1929; DB 4;
ilarity 90.9%; Pred. No. 1.7e-160;
Conservative 10; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILIAN,
ADDRESSEE: CECCHI, STEWART & OLSTEIN
STREET: 6 BECKER FARM ROAD
CITY: ROSELAND
STATE: NEW JERSEY
COUNTRY: USA
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APPLICATION NUMBER: US/08/468,847B
FILING DATE: 0 June 1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CPHPNEASFRLYSLFNDIHKFRD 379
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                              LENGTH: 379 amino acids TYPE: amino acid
          SEQUENCE CHARACTERISTICS
                                                      TOPOLOGY: linear
MOLECULE TYPE: protein
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP: 07068
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INC
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Matches 348; Conserva
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Patent No. 6413735
GENERAL INPORMATION:
APPLICANT: Lau, Lester F.
TITLE OF INVENTION: Extracellular Matrix Signalling Molecules
NUMBER OF SEQUENCES: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun STREET: 6300 Sears Tower, 233 South Wacker Drive CITY: Chicago.
                                                                                                                                                                                                                                ..
                                                                                                                                                                               Length 379,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: Illinois
STATE: Illinois
CONDTRY: United States of America
ZIP: 60606-600
COMPUTER READALE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
COMPUTER: IEM PC compatible
COMPUTER: IEM PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.30
CURRINT APPLICATION NUMBER: US/09/142,569
FILING DATE: 02-Apr-1999
CLASSIFICATION: CURROWD.>
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISENTAINON NUMBER: 36,107
REGISENTAINON NUMBER: 36,107
REPRENCE/DOCKET NUMBER: 28758/33766
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                19;
                                                                                                                                                                            Query Match
Best Local Similarity 90.9%; Pred. No. 1.7e-160;
Matches 348; Conservative 10; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              359 CPHANEAAFPFYRLFNDIHKFRD 381
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; LENGTH: 379 AMINO ACIDS
; TYPE: AMINO ACID
; STRANDEDNESS:
; TOPOLOGY: LINEAR
; MOLECULE TYPE: PROTEIN
US-08-468-847B-11
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INFORMATION FOR SEQ ID NO: 2:
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us-09-495-448a-4.rai

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61 QLGELCTERDPCDPHKGLFCDFGSPANRKIGVCPAK-DGAPCVFGGSVYRSGESFQSSCK 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     266 FELSGCTSVKTYRAKFCGVCTDGRCCTPHRTTTLPVBFKCPDGEIMKKNNMFIKTCACHY 325
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         206 ACSKTCGMGISTRVTNDNTFCRLEKOSRLCMVRPCBADLEENIKKGKKCIRTPKIAKPVK 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KOLNEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNC 117
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                                                           1 MSSRIARALALVVTLLHLTRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCAK
                                                                                                          1 MLASVAGPVSLALVLLLCTRPATGQDCSAQCQCAREAAPRCPAGVSLVLDGCGCCRVCAK
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  Gaps
     40;
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     58; Mismatches 107; Indels
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GRURAL INFORMATION:
APPLICANT: FIENCER, INC
APPLICANT: ALLEN, MANGARE
APPLICANT: ALLEN, MANGARE
APPLICANT: ALLEN, MANGARE
APPLICANT: CARMICHAEL, David
FILER REFERENCE: FIENCOLIOO-1
CURRENT APPLICATION NUMBER: US/09/292,036
FILER REPREATION DATE: 1999-04-14
PRIOR FILING DATE: 1999-04-14
PRIOR FILING DATE: 1999-04-14
PRIOR FILING DATE: 1998-11-06
NUMBER OF SEQ ID NOS: 18
SEQ ID NO 3
IENGTH: 348
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46.6%; Pred. No. 2.7e-75;
iive 57; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358 NCPHANEAAFPFY -- RLFNDI 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       326 NCPGDNDIFESLYYRKMYGDM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3, Application US/09292036
Patent No. 6358741
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Best Local Similarity 46.6
Matches 178; Conservative
     176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Mouse
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US-09-292-036-3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60 LNEDCSRIQPCDHTKGLECNFGASPAATNGICRAQSEGRPCEYNSKIYQNGESFQPNCKH 119
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180 GKELGFDASEVELTRNNELIAVGKGRSLKRLFVFGMEP--RILYNPLQGQKCIVQTTSWS 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178 SKEFGLDASEGELTRNNELIAIVKG-GLKMLPVFGSEPQSRAFENP----KCIVQTTSWS 232
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                                                                                                                                                                                                                                                                                                                                                                                                                            Length 375;
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Pred. No. 2.5e-75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      80.1%; Score 1695; DB 1;
ilarity 81.0%; Pred. No. 4.5e-140;
Conservative 20; Mismatches 41;
                       33,073
FR: 325800-442
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REGISTATION NUMBER: 32,073
REFERENCE/DOCKET NUMBER: 3256
RELECOMMUNICATION INPORMATION:
TELEPHONE: 201-994-1700
TELEPKX: 201-994-1704
INFORMATION FOR SEQ ID NO: 58CUENCE CHARACTERISTICS:
LENGTH: 375 AMINO ACIDS
TYPE: AMINO ACIDS
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Matches 311; Conserv
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Best Local Similarity
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CRGANISM: Rat

US-09-582-337-2
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US-09-582-337-2
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118 QHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCBEWVCDEDSIKDPMEDQDG 177
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                            120 KYQCTCLDGAVGCVPLCSMDVRLPSPDCPFPRRVKLPGKCCKEWVCDEP-----
                                                                                                                        206 SACSKTCGMGISTRVTNDNTFCRLEKQSRLCMVRPCBADLBENIKKGKKCIRTPKIAKPV
                                                                                            178 LLGKELGFDASEVELTRNNELIAVGKGRSLKRL-PVFGMEPRILYNPLQGQKCIVQTTSW
                                                                                                                                                                                           237 SQCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPV
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6, Application US/09142569
Patent No. 6413735
GENERAL INFORMATION:
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Extracellular Matrix Signalling Molecules
NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS: 17
ADDRESSEE: MAISHAIL, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: Chicago
CONTRY: United States of America
COUNTRY: United States of America
CONTRY: United States of America
ZIP: 6606-6402
COMPUTER READABLE FORM:
MEDIUM TYPER: Florpy disk
COMPUTER: IBM PC compatible
CORPUTER: IBM PC compatible
SOFTWARE: PatentIN Release #1.0, Version #1.30
CURRENT APPLICATION NUMBER: US/09/142,569
FILING DATE: 02-Apr-1999
CLASSIFICATION: Chiknown>
ATTORNEY/AGENT INFORMATION:
NAME: Cloud, David W.
REFERRATION NUMBER: 36,107
REFERRATION INFORMATION:
TELEFRAN: 312/474-630
TELEFRAN: 312/474-630
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ilarity 46.3%; Pred. No. 6.1e-75;
Conservative 58; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                   357 YNCPHANEAAFPFY -- RLFNDI 376
                                                                                                                                                                                                                                                                                                                                                                                                                                  326 YNCPGDNDIFESLYYRKMYGDM 347
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TYPE: amino acid
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TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 6: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 177; Conservat
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US-09-142-569-6
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                                                                                                                                                                                                297 RFTYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCN 356
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       178 LLGKELGFDASEVELTRNNELIAVGKGRSLKRL-PVFGMEPRILYNPLQGQKCIVQTTSW 236
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                                                ---KDRTAVGPALAAYRLEDTFGPDPTMM-----RANCLVQTTEW
                                                                                                    SOCSKICGIGISTRUTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPV
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APPLICANT: Hastings, Gregg A. and Adams, Mark D.
APPLICANT: Hastings, Gregg A. and Adams, Mark D.
TITLE OF INVENTION: Human CCN-Like Growth Factor
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSER: CARELLA, BYRNE, BAIN, GILFILLIAN,
ADDRESSER: CECCHI, STEWART & OLSTEIN
STREET: 6 BECKER FARM ROAD
STREET: NEW JERSEY
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
44.8%; Score 948.5; DB 1;
Best Local Similarity 46.3%; Pred. No. 6.1e-75;
Matches 177; Conservative 58; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: IBM PS/2
CURRENT APPLICATION DATA:
FILING DATE: 6 June 1995
CLASSIFICATION: 435
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YNCPGDNDIFESLYYRKMYGDM 347
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: MULLINS, J.G.
REGISTRATION NUMBER: 33,073
REFERENCE/DOCKET NUMBER: 32:
TELECOMMUNICATION: TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATA:
ATTORNEY/AGENT INFORMATION:
NAME: MULLINS, J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 348 AMINO ACIDS TYPE: AMINO ACID
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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APPLICANT: SCHWIDT, Brian
APPLICANT: SCHWIDT, Brian
APPLICANT: SCHWIDT, Fran
APPLICANT: SCHWIDT, Fran
APPLICANT: SCHWIDT, Fran
APPLICANT: CARMICHAEL, David
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR (CTGF) AND METHODS OF USE
FILE REFERENCE: FIREADISO-100-1
CURRENT APPLICATION NUMBER: US 09/292,036
CURRENT FILING DATE: 1999-04-14
FRIOR APPLICATION NUMBER: US 09/292,036
PRIOR FILING DATE: 1999-04-14
FRIOR FILING DATE: 1999-04-16
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATCHTIN VETSION 3.0
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119 HQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEFWYCDEDSIKDPMBDQDGL 178
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       298 FIYAGCLSVKKYRPKYCGSCVDGRCCIPQLIRIVKMRFRCEDGEIFSKNVMMIQSCKCNY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      44.8%; Score 948; DB 4; Length 34.46.3%; Pred. No. 6.8e-75; ive 58; Mismatches 105; Indels
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; Patent No. $408010
GENERAL INFORMATION:
APPLICANT: Grotendorst, Gary R.,
APPLICANT: Bradham Jr., Douglas M.,
TILLE OF INVENTION:
OWNBER OF SEQUENCES: 2
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                    326 NCPGDND-IFPCMYYRKMYGDM 346
NCPHANEAAFP--FYR-LFNDI 376
                                                                                                                Sequence 2, Application US/09292036
Patent No. 6358741
GENERAL INFORMATION:
APPLICANT: FIENGEN, INC.
APPLICANT: SCHMIDT, Brian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 46.3
Matches 177; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
CRGANISM: Rat
US-09-292-036-2
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US-09-292-036-2
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                  KQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNC 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 2, Application US/09187478
; Patent No. 6348329
; GENERAL INFORMATION:
APPLICANT: Schmidton:
APPLICANT: Allen, Margaret L.
; TITLE OF INVENTION: Connective Tissue Growth (CTV:
FILE REFERENCE: 08766/004001
; CURRENT APPLICATION NUMBER: 1998-11-06
; NUMBER OF SEQ ID NOS: 2
SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: PRT
; ORGANISM: No. 6348329mal Rate Kidney Fibroblast
US-09-187-478-2
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Matches 177; Conservative
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US-09-187-478-2
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TITLE OF INVENTION: CO. NUMBER OF SEQUENCES: 2 CORRESPONDENCE ADDRESS: ADDRESS: Spensley
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Best Local Similarity
Matches 174; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          130 AVGCMPLCSMDVRLPSPDCPFPRRVKLPGKCCEEWVCDEP------KDQ------ 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173 -----TVVGPALAAYRLEDTFGPDPTMI-----RANCLVQTTEWSACSKICGM 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246 GISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLS 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              216 GISTRUTNDNASCRLEKQSRLCMVRPCEADLEENIKKGKKCIRTPKISKPIKFELSGCTS 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       306 VKKYRPKYCGSCVDGRCCTPQLIRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67 TQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDG 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127 AVGCIPLCPQELSLPNLGCPNPRLVXVTGQCCEEWVCDEDSIXDPMEDQDGLLGKELGFD 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 VAFVVILALCSRPAVGONCSGPCRCPDEPAPRCPAGVSLVLDGCGCCRVCAKQLGELCTE 70
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 44.8%; Score 947; DB 1; Length 34; Best Local Similarity 46.6%; Pred. No. 8.3e-75; Matches 174; Conservative 58; Mismatches 101; Indels
                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
FILING DATE:
            ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: CA
                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., John W.
REGISTRATION NUMBER: 31,678
REFERENCE/COCKET NUMBER: PD-1294
TELECOMMINICATION INFORMATION:
TELEPHONE: 619-455-5100
                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/752,427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 619-455-5110
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 349 amino acids
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amino acid
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MOLECULE TYPE: protein
US-08-167-628-2
CORRESPONDENCE ADDRESS:
                                                    CITY: La Jo
STATE: CA
COUNTRY: US
ZIP: 92037
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US-08-386-680-2; Application US/08386680; Paquence 2, Application US/08386680; Parent No. 5585270; GENERAL INFORMATION; APPLICANT: Grotendorst, Gary R.

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71 RDPCDPHKGLFCDFGSPANRKIGVCTAK-DGAPCIFGGTVYRSGESFQSSCKYQCTCLDG 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             173 -----TVVGPALAAYRLEDTFGPDPTMI-----RANCLVQTTEWSACSKTCGM 215
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                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPALIDLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/386,680
FILING DATE: 10-FEB-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/167,628
FILING DATE:
APPLICATION NUMBER: US/07/752,427
FILING DATE:
ATTORNEY.
Bradham Jr., Douglas M.,
JENTION: CONNECTIVE TISSUE GROWTH FACTOR
                                                                 ADDRESSEE: Spensley Horn Jubas & Lubitz
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY JABON INFORMATION:
NAME: Wetherell, Jr. Ph.D., John W.
REGISTRATION NUMBER: 31,678
REGISTRATION NUMBER: PD-1294
TELECOMPUNICATION INFORMATION:
TELECHONE: 619-455-5100
TELERAX: 619-455-5110
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amino acid
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| S36 FESLYYRKMYGDM 348
                                                                                                                                                                  STATE: CA
COUNTRY: US
ZIP: 92037
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 619-455-5110
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search
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Job time : 17.5434 secs

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RESULT 1
US-10-053-753-4
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Sequence 2, Appli
Sequence 2, Appli
Sequence 5, Appli
Sequence 42, Appl
Sequence 2, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1412, Appli
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                                                                                                                                                                                                                 April 22, 2004, 17:58:40; Search time 38.6013 Seconds (without alignments) 2728.846 Million cell updates/sec
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Sequence 43, A
Sequence 44, A
Sequence 44, A
Sequence 84, A
                                                                                                                                                                                                                                                                                                                                                                      US-09-495-448A-4
2116
1 MSSRIARALALVVILHLTR......ANBAAFPFYRLFNDIHKFRD 381
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| cgn2_6/ptodata/1/pubpaa/USO7_PUBCOMB.pep:*
| cgn2_6/ptodata/1/pubpaa/PCT_MEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/PCT_MEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO6_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
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| cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO8_NEW_PUB.pep:*
| cgn2_6/ptodata/1/pubpaa/USO8_PUBCOMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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1 US-10-182-432-4

1 US-10-294-796-2

1 US-10-394-015-5

1 US-10-394-015-5

1 US-10-394-015-5

2 US-10-044-42

2 US-10-044-564-42

2 US-10-099-322-44

3 US-10-099-322-44

5 US-10-099-322-44

6 US-10-044-564-44

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Match
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Perfect score:
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Maximum DB 8
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                                                                                                                                                                                                                             Run on:
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No.
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| a) a) | 3-753- 0-036- | 14 | 349 | 44 | 947 947 |
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| equence 8, | 3-753-8 | 12 | * 4 | . 4 | 947 |
| 4, 0, | 13 US-10-101-040-4 | ц - | 4 4 | • | 947 |
| 7 | 1-040- | 133 | 4, | 4. | 948 |
| 7 | 0-173- | 13 | 4 | 4. | 948 |
| 4 | 4 | 16 | 4 | 4. | 48 |
| 9 | 2-432- | 15 | 4 | 4. | 948.5 |
| æ | 5-977 | 14 | 4 | 4. | 48 |
| ģ | 3-753- | 13 | 4 | 4. | 48 |
| ທັ | -625B- | 0 | 4 | 4. | 48 |
| ě | 1-040-3 | 13 | 4 | • | 52 |
| 7 | 390-98 | 74 | 4 | 'n | 953 |
| 26, | 464-368- | 16 | 4 | ٠ | 955 |
| , | .245-977- | 14 | 4 | ď. | 955 |
| 63 | 464-368-6 | 16 | 7 | 8 | 3 |
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| Sequence 62, | 64-368-6 | 16 | ~ | • | 1928 |
| 90 | 464-368-6 | 16 | 7 | H | σ |
| 45, | 044-564-4 | 15 | 7 | ä | σ |
| 7 | 182-432- | 15 | 7 | ä | σ |
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| 41, | 144-56 | S. | œ | 9 | О |
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ALIGNMENTS

PRESTUT 1

10S-10-053-753-4

10S-10-053-753-4

Sequence 4, Application US/10053753

Publication No. US20020150986A1

GENERAL INPORMATION:
TITLE OF INVENTION: Extracellular Matrix Signalling Molecules NUMBER OF SEQUENCES: 17

CORRESPONDENCE ADDRESS:
CORRESPONDENCE Marshall, O'Toole, Gerstein, Murray & Borun STREET: 6300 Sears Tower, 233 South Wacker Drive CITY: Chicago
STATE: 11linois
CONTYER: Illinois
COMPUTER: READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC Compatible
OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/053,753
FILING DATE: 22-38n-2002
CLASSIFICATION: AURHOWN:
ATTORNEY/AGENT INPORMATION:
NAME: Clough, David W.
REGISTRATION INPORMATION:
TELEFAX: 312/474-0448
TTELESCOMMUTCATION INPORMATION:
TELEFAX: 312/474-0448
TTELESTERM: 38 anino acide
TYPE: amino acide
TYPE: amino acide
TYPE: amino acide
TYPE: TYPE: procein

us-09-495-448a-4.rapb

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          240
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                                          181 KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCS
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          KELGFDASEVELTRINNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCS
                                                                                                  241 KTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTY
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                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/09901910
; Bequence 2, Application US/09901910
; Publication No. US20030012768A1
; GENERAL INFORMATION:
    APPLICANT: Li, Haodong
    APPLICANT: Adams, Mark
    APPLICANT: Adams, Mark
    APPLICANT: Calenda Valerie
; TITLE OF INVENTION: Connective Tissue Growth
; TITLE OF DATE: 1999-07-01
; PRIOR APPLICATION NUMBER: 09/348,815
PRIOR FILING DATE: 1999-06-02
; PRIOR PILING DATE: 1999-07-02
; PRIOR PILING DATE: 1994-07-12
PRIOR PILING DATE: 2000-07-11
; PRIOR APPLICATION NUMBER: 60/217,402
; PRIOR PILING DATE: 2000-07-11
; PRIOR PILING DATE: 2000-07-11
; PRIOR FILING DATE: 2001-05-18
; SEQ ID NOS: 8
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CRGANISM: homo sapiens
US-09-901-910-2
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| Sequence 4, Application US/10182432
| Publication No. US20040002124A1
| Publication No. US20040002124A1
| GENERAL INFORMATION:
| APPLICANT: LAU, Lester F., YEUNG, Cho-Yau, and GREENSPAN, Jeffrey
| TITLE OF INVENTION: CYREL COMPOSITIONS AND METHODS
| FILE REPERENCE: 214448/00029
| CURRENT APPLICATION UNMER: US/10/182,432
| CURRENT FILING DATE: 2002-07-26
| NUMBER OF SEQ ID NOS: 38
| SOTUMBRE: PatentIn Ver. 2.0
NAWE/KEY: misc feature Cyr61 amino acid sequence"; SEQUENCE DESCRIPTION: SEQ ID NO: 4:
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                                                                                                                                            Query Match 100.0%; Score 2116; DB 13;
Best Local Similarity 100.0%; Pred. No. 2.4e-172;
Matches 381; Conservative 0; Mismatches 0;
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                  CURRENT FILING DATE: 2003-03-24
PRIOR PELICATION NUMBER: US/09/325,019
PRIOR FILING DATE: 1999-06-03
PRIOR FILING DATE: EABLIER APPLICATION NUMBER: 60/088,320
PRIOR RILING DATE: EARLIER FILING DATE: 1998-06-05
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PATCHIN VEY: 2.0
SEQ ID NO 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITE OF INVENTION: Proteins and Nucleic Acids Encoding Same TITE OF INVENTION: Proteins and Nucleic Acids Encoding Same TITE OF INVENTION: Proteins and Nucleic Acids Encoding Same CURRENT APPLICATION WURBER: US/10/099,322

CURRENT TILING DATE: 2002-09-11

PRIOR PILING DATE: 2001-01-11

PRIOR APPLICATION NUMBER: 60/261,018

PRIOR APPLICATION NUMBER: 60/261,018

PRIOR APPLICATION NUMBER: 60/261,018

PRIOR PILING DATE: 2001-09-10

PRIOR FILING DATE: 2001-01-11

PRIOR FILING DATE: 2001-01-11

PRIOR FILING DATE: 2001-01-11

PRIOR PILING DATE: 2001-01-11

PRIOR APPLICATION NUMBER: 60/261,026

PRIOR PILING DATE: 2001-01-11
                                                                                                                                                                                                                                                                                                                                    Length 381;
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99.5%; Pred. No. 1.7e-171;
iive 1; Mismatches 1;
CURRENT APPLICATION NUMBER: US/10/394,015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/261,029
FILING DATE: 2001-01-11
APPLICATION NUMBER: 60/313,170
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Publication No. US20030215449A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 99.5
Matches 379; Conservative
                                                                                                                                                                                                                                       TYPE: PRT
; ORGANISM: Homo sapiens
US-10-394-015-5
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TITLE OF INVENTION: Connective Tissue Growth Factor-2
FILE REFERENCE: PPI26PID5
FULE REFERENCE: PPI26PID5
CURRENT APPLICATION NUMBER: US/10/294,796
CURRENT FILING DATE: 2002-11-15
FRIOR PELING DATE: 1999-07-08
FRIOR PILING DATE: 1999-07-08
FRIOR PILING DATE: 1995-06-02
FRIOR APPLICATION NUMBER: US 08/459,101
FRIOR APPLICATION NUMBER: PCT/US94/07736
FRIOR APPLICATION NUMBER: PCT/US94/07736
FRIOR FILING DATE: 1994-07-12
NUMBER OF SEQ ID NOS: 6
SOFTWARE: Patentin version 3.1
SEQ ID NO 2
LENGTH: 381
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Publication No. US20030180891A1
GENERAL INFORMATION:
APPLICANT: Young, Paul
APPLICANT: Ruben, Steven M.
TITLE OF INVENIOR: Connective Tissue Growth Factor-4
FILE REFERENCE: PF467
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Pred. No. 1.7e-171;
1; Mismatches 1;
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                                                                                          361 HANEAAFPFYRLFNDIHKFRD 381
                                                                                                                                                                                                               Sequence 2, Application US/10294796 Publication No. US20030078391A1 GENERAL INFORMATION:
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Best Local Similarity 99.5%;
Matches 379; Conservative
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CRGANISM: Homo sapiens
US-10-294-796-2
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US-10-294-796-2
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           Length 381;
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APPLICANT: American Home Products Corporation
APPLICANT: Sampath, Deepak
APPLICANT: Sampath, Deepak
APPLICANT: Sampath, Deepak
APPLICANT: Winnskar, Richard
TITLE OF INVENTION: Use of Cyr61 in the treatment and
TITLE OF INVENTION: Use of Cyr61 in the treatment and
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       Query Match 99.5%; Score 2106; DB 15;
Best Local Similarity 99.5%; Pred. No. 1.7e-171;
Matches 379; Conservative 1; Mismatches 1;
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ORGANISM: Homo Sapien
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Sequence 42, Application US/10044564

Publication No. US2040018196A1

GENERAL INFORMATION:

APPLICANT: Mezes et al.

TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-240

CURRENT APPLICATION NUMBER: US/10/044,564

CURRENT APPLICATION NUMBER: 00/261,014

PRIOR FILING DATE: 2001-01-11

PRIOR FILING DATE: 2001-01-11

PRIOR FILING DATE: 2001-01-11

PRIOR FILING DATE: 2001-01-11

PRIOR APPLICATION NUMBER: 60/261,013

PRIOR PILING DATE: 2001-01-11

PRIOR PILING DATE: 2001-01-11
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; NUMBER OF SEQ ID NOS: 324
; SOFTWARE: Patentin Ver. 2.1
; SEQ ID NO 42
; LENGTH: 381
; TYPE: PRT
; ORGANISM: HOMO SAPIENB
US-10-099-322-42
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CRGANISM: Homo sapiens
US-10-044-564-42
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                                                                                                                                                                                                                                                                                                          Sequence 61, Application US/10464368
Publication No. US20040023356A1
GENERAL INFORMATION
APPLICANT: Krumlauf, Robb
1TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR REGULATING BONE DEPOSITION
FILE REPERENCE: 40716-1P-017
CURRENT PELICATION NUMBER: US/10/464,368
PRIOR PPLICATION NUMBER: 60/388,970
PRIOR FILING DATE: 2003-06-14
NUMBER OF SEQ ID NOS: 140
SOFTWARE: PATENTIN UVERSION 3.2
SEQ ID NOS: 140
SEQ ID NOS: 140
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ORGANISM: HOMO SAPIENS
US-10-464-368-61
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Publication No. US20030215449A1;
GENERAL INFORMATION:
TILLS APPLICANT: Meses et al.
TILLE OF INVENTION: Proteins and Nucleic Acids Encoding Same;
FILE REPERINCE: 21402-240CIP
CURRENT APPLICATION NUMBER: US/10/099,322
CURRENT FILING DATE: 2002-09-11
PRIOR APPLICATION NUMBER: 60/261,014
PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,013
Sequence 10. US200200523081

Sequence No. US200200523081

GENERAL INFORMATION:
APPLICANT: Rosen te al.
TILLE OF INVENTION: Nucleic Acids, Proteins and Antibodies
FILE REFERENCE: PA106

CURRENT APPLICATION NUMBER: US/09/925,301

CURRENT FILING DATE: 2001-08-10

PRIOR APPLICATION NUMBER: PCT/US00/05882

PRIOR FILING DATE: 1999-03-12

NUMBER: OF SEQ ID NOS: 1694

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 1432
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Pred. No. 2.1e-171;
1; Mismatches 1;
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Best Local Similarity 99.5%;
Matches 379; Conservative
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CRGANISM: Homo sapiens
US-09-925-301-1432
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J Sequence 44, Application US/10099322

Publication No. US2003021549A1

J GRERRAL INFORMATION:

APPLICANT: Mezes et al.

TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same TILE REPERENCE: 21402-240CIP

CURRENT PRILING DATE: 2002-09-11

PRIOR PILING DATE: 2001-01-11

PRIOR PILING DATE: 2002-01-11

PRIOR PILING DATE: 2002-01-11
                                                                                                                                                                                                                      Length 381;
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             SOFTWARE: Patentin Ver. 2.1
                                   ; SEQ ID NO 43
; LENGTH: 381
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-044-564-43
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Sequence 43, Application US/10044564
Publication No. US20040018196A1
GENERAL INCRATION:
APPLICANT: Mease et al.
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 99.4%; Score 2103; DB 15; Best Local Similarity 99.2%; Pred. No. 3.1e-171; Matches 378; Conservative 2; Mismatches 1;
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CURRENT FILING DATE: 2002-09-09
PRIOR APPLICATION NUMBER: 60/261,014
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR PLING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR PLING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PLING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR APPLICATION NUMBER: 60/313,170
PRIOR APPLICATION NUMBER: 60/313,170
PRIOR PLING DATE: 2001-01-01-11
PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/313,170
PRIOR PILING DATE: 2001-08-17
PRIOR PILING DATE: 2001-08-17
PRIOR FILING DATE: 2002-01-11
NUMBER OF SEQ ID NOS: 324
SOFTWARE: PATENTIN VET. 2.1
SEQ ID NO 43
LENGTH: 381
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ORGANISM: Homo sapiens
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GENERAL INFORMATION:
APPLICANT: Schlegel, Robert
APPLICANT: Bochegel, Robert
APPLICANT: Bochegel, Robert
APPLICANT: Gannavarapu, Manjula
APPLICANT: Manetkar, Shubhangi
APPLICANT: Anderson, Dustin
APPLICANT: MAGRES, COMPOSITION, KITS, AND
TITLE OF INVENTION: HTERAPY OF PROSTATE CANCER
TITLE OF INVENTION: HTERAPY OF PROSTATE
CURRENT APPLICATION NUMBER: US/10/205, 823
CURRENT APPLICATION NUMBER: 60/314,356
PRIOR FILING DATE: 2001-09-25
PRIOR FILING DATE: 2001-09-26
PRIOR FILING DATE: 2001-09-27
PRIOR FILING DATE: 2001-09-27
PRIOR FILING DATE: 2001-09-27
PRIOR FILING DATE: 2001-09-20
PRIOR PRIOR PRIOR DATE: 2001-09-20
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NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQ 120
                                                  61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ
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                                                                                                                              CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCREWVCDEDSIKDPMEDQDGLLG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HANEAAFPFYRLFNDIHKFRD 381
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ORGANISM: Homo sapiens
US-10-205-823-84
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                                                                                                                                  1 MSSRIARALALVVTLLHTTRLALSTCPAACHCPLEAPKCAPGVKDGCGCCKVCAKQL
                                                                    Gaps
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APPLICANT: Mezes et al.
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REPERENCE: 21402-204
CURRENT APPLICATION NUMBER: US/10/044,564
CURRENT FILING DATE: 2002-09-09
PRIOR PELING DATE: 2001-01-11
PRIOR PELING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,026
PRIOR FILING DATE: 2001-01-11
PRIOR PELING DATE: 2001-01-11
PRIOR PELING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PELING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/313,170
PRIOR PELING DATE: 2001-01-11
PRIOR PELING DATE: 2001-08-17
NUMBER OF SEQ ID NOS: 306
SOFTWARE: PALENTIN VEY: 2.1
TYPE: PRI
TYPE:
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   Length 381;
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Pred. No. 5.5e-171;
1; Mismatches 2;
99.2%; Score 2100; DB 15;
larity 99.2%; Pred. No. 5.5e-171;
Conservative 1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361 HANEAAFPFYRLFNDIHKFRD 381
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US-10-044 564-44
Sequence 44, Application US/10044564
Publication No. US20040018196Al
GENERAL INFORMATION:
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Best Local Similarity 99.2%;
Matches 378; Conservative
                             Best Local Similarity
Matches 378; Conserv
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Query Match
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Search completed: April 22, 2004, 18:08:17 Job time : 39.6013 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run' on:

April 22, 2004, 17:53:39 ; Search time 16.5434 Seconds (without alignments) 2215.320 Million cell updates/sec

US-09-495-448A-4 2116 1 MSSRIARALALVVTLIHLTR......ANEAAFPFYRLFNDIHKFRD 381 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283366 segs, 96191526 residues Searched:

283366 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR 78:*
1: pirl:*
2: pir2:*
3: pir3:*
4: pir4:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | Description | gene CYR61 protein | CEF-10 protein pre | beta IG-M2 protein | connective tissue | NOV protein - chic | gene novH protein | hypothetical prote | hypothetical prote | Balbiani ring 3 pr | ein - | zonadhesin - mouse | thrombospondin pre | mucin-like peptide | laminin B1k chain | notch4 - mouse | hypothetical prote | protein F40E10.4 [| mucin, submaxillar | | mucin 2 precursor, | secreted leucine-r | ני | tenascin-X - bovin | | | proteir | MUCSB, | | notch protein homo |
|-----------|-----------------------|--------------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------|--------------------|--------------------|--------------------|-------------------|----------------|--------------------|--------------------|--------------------|--------|--------------------|--------------------|--------|--------------------|--------|------|---------|--------|--------|--------------------|
| SUMMARIES | ΔI | A35669 | A41428 | A40578 | A40551 | S20078 | I38069 | T26972 | T27283 | \$08167 | T13954 | T42215 | A39804 | A42112 | A53612 | T09059 | T22025 | D89711 | T03099 | A57534 | A43932 | T42626 | JC5598 | T42629 | T16840 | 5 | A24420 | A53767 | A36665 | 818188 |
| | DB | 7 | ~ | Ŋ | N | N | N | (1) | N | N | N | N | - | N | N | N | ~ | (1 | ~ | N | ~ | ~ | ~ | ~ | N | 7 | Н | ~ | ~ | N |
| | Query Match Length | 379 | ~ | 348 | 349 | 351 | 357 | 1111 | 1620 | 1700 | 1574 | 37 | 1178 | 837 | 1170 | 1964 | 601 | 601 | 13288 | 1042 | 3020 | 1025 | 1034 | 4135 | 1101 | 2437 | 2703 | 1056 | 1480 | 2531 |
| do | Query | 91.2 | 80.1 | 45.0 | 44.8 | 40.2 | 39.1 | 8.3 | 8.5 | 7.4 | 7.2 | 7.2 | 7.1 | 7.1 | 7.0 | 6.9 | • | 6.9 | | 6.7 | ٠ | 9.9 | | 9.9 | 9.9 | ٠ | 6.5 | 6.5 | • | ٠ |
| | Score | 1929 | 1695 | 952.5 | 947 | 851.5 | 827.5 | 174 | 173.5 | 157 | 153 | 152 | 150.5 | 150 | 147.5 | 146 | 145 | 145 | 141.5 | 141 | 141 | 140.5 | 140.5 | 140 | 139.5 | ~ | 138.5 | 138 | 137.5 | 137 |
| | Result No. | 1 | 7 | m | 4 | īÙ | ø | 7 | 60 | o, | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | | 27 | 28 | 29 |

| kalinin B1 - mouse | thrombospondin 1 p | hypothetical prote | probable tenascin | agrin - rat | laminin alpha-2 ch | hypothetical prote | probable laminin a | agrin precursor - | von Willebrand fac | notch protein homo | ine-ric | slit protein 2 pre | slit-1 protein hom | hypothetical prote | protein T22A3.8 [i |
|--------------------|--------------------|--------------------|-------------------|-------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|-----------|--------------------|--------------------|--------------------|--------------------|
| | | | | | | | | | | | | | | | |
| I56985 | A40558 | T25169 | T09070 | AGRT | S53868 | T23433 | T37316 | AGCH | VWHU | A40043 | A55035 | B36665 | T42218 | T23064 | F87908 |
| 2 I56985 | 2 A40558 | 2 T25169 | 2 T09070 | 1 AGRT | 1 S53868 | 2 T23433 | 2 T37316 | 1 AGCH | 1 VWHU | 2 A40043 | 2 A55035 | 2 B36665 | 2 T42218 | 2 T23064 | 2 F87908 |
| 0 | 7 | Ŋ | 4006 2 T09070 | - | Н | N | N | - | п | N | N | N | N | (1 | ~ |
| 1168 2 | 1170 2 | 330 2 | 7 | 1959 1 | 3106 1 | 3672 2 | 3704 2 | 1955 1 | 2813 1 | 2555 2 | 251 2 | 1469 2 | 1531 2 | 2823 2 | 2823 2 |
| 1168 2 | 1170 2 | 330 2 | 6.4 4006 2 | 1959 1 | 3106 1 | 3672 2 | 6.3 3704 2 | 1955 1 | 6.3 2813 1 | 6.3 2555 2 | 6.2 251 2 | 6.2 1469 2 | 1531 2 | 6.2 2823 2 | 6.2 2823 2 |

ALIGNMENTS

| RESULT 1 A35669 Game CYR61 protein precureor - mouse C;Species: Mus musculus (house mouse) C;Accesion: A35669; 148119; 3[6446 C;Accesion: A35669; 148119; 3[6446 C;Accesion: A35669; 148119; 3[6446 Noi. Cell. Biol. 10, 3569-3577, 1990 A;Title: Expression of cyr61, a growth factor-inducible A;Accesion: A35669; MUDD:90287146; PMID:2355916 A;Accesion: A35669; MUDD:90287146; PMID:2355916 A;Accesion: A35669; MUDD:90287146; PMID:2355916 A;Accesion: A35669; MUDD:90287146; PMID:2355916 A;Accesion: BRAA A;References in BRA32490; NID:9192909; PIDN:AAA375; A;Molecule type: BRAA A;Accesion: T48319 A;Action: Le authors translated the codon GAT for residuntic A;Accesion: T48319 A;Accesion: T48319 A;Action: A3568 A;Accesion: T48319 A;Action: A3569 A;Accesion: BRAA A;Accesion: T48319 A;Action: A3569 A;Accesion: A3599 A;Accesion: |
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us-09-495-448a-4.rpr

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A;Status: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Kesidues de AERUA
A;Cross-references GB:M80263; NID:g201945; PIDN:AAA73135.1; PID:g201946
B;Ryseck, R.P.; Macdonald-Bravo, H.; Mattei, M.G.; Bravo, R.
Cell Growth Differ. 2, 225-233, 1991
A;Tille: Structure, mapping, and expression of fisp-12, a growth factor-inducible gene A;Reference number: A53228
A;Accession: A53228
A;Accession: A53228
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-160, 'K',162-348 <RXS>
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A)Residues: 1.349 **ERAA
A)Cross-references: GB:M92934; GB:M36965; GB:S56201; NID:g180923; PIDN:AAA91279.1;
R;Oemar, B.S.; Werner, A.; Yang, Z.; Garnier, J.M.; Gentz, R.; Luescher, T.F.
submitted to the RMEL Data Library, April 1994
A;Description: Differential cloning and expression of human connective tissue growt
A;Reference number: S44205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       206 SACSKTCGMGISTRVTNDNTFCRLEKQSRLCMVRPCBADLEENIKKGKKCIRTPKIAKFV 265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61 KQLGELCTERDPCDPHKGLFCDFGSPANRKIGVCTAK-DGAPCVFGGSVYRSGESFQSSC 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        297 RFTYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCN 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118 QHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDG 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 connective tissue growth factor - human
C;Species: Homo sapiens (man)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 21-Jul-2000
C;Accession: A40551; 844205
R;Bradham, D.M.; Igarashi, A.; Potter, R.L.; Grotendorst, G.R.
J. Cell Biol. 114, 1285-1294, 1991
A;Title: Connective tissue growth factor: a cysteine-rich mitogen secreted by A;Reference number: A40551; MUD:91373462; PMID:1654338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KOLNEDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYQNGESFQPNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           178 LLGKELGFDASBVELTRNNELIAVGKGRSLKRL-PVFGMEPRILYNPLQGQKCIVQTTSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237 SQCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSSRIARALALVVTLLHL-TRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120 XYQCTCLDGAVGCVPLCSMDVRLPSPDCPPPRRVKLPGKCCEEWVCDEP------
                                                                                                                                                                                                                                                                                               PID:9193314
                                                                                                                                                                                                                                                                                                                                                                                             Length 348;
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                                                                                                                                                                                                                             A;cresidues: 1-160,'K',162-348 «RYS»
A;Cross-references: GB:M70641; NID:g193313; PIDN:AAA37627.1;
C;Genetics:
A;Gene: fisp-12
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A;Molecule type: mRNA
A;Residues: 1-349 < GENA
A;Cross-references: EMBL:X78947; NID:g474933; PID:g474934
                                                                                                                                                                                                                                                                                                                                                                                           45.0%; Score 952.5; DB 2;
46.6%; Pred. No. 7.9e-63;
ive 57; Mismatches 106;
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YNCPGDNDIFESLYYRKMYGDM 347
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 46.6
Matches 178; Conservative
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beta IG-M2 protein precursor - mouse
cispecies Mus musculus (house mouse)
cjopecies Mus musculus (house mouse)
cjobate: 06-Mar-1992 #sequence_revision 06-Mar-1992 #text_change 01-Dec-2000
cjoacession: A40578; A53228
Ribrunner, A.; Olinn, J.; Neubauer, M.; Purchio, A.F.
DNA Cell Biol. 10, 293-300, 1991
A/Title: Identification of a gene family regulated by transforming growth factor-beta.
A/Reference number: A40578; MUID:91229699; PMID:2029337
                                                                                                                                                                                                                                                                                                              RESULT 2
A44428
CEF-10 protein precursor - chicken
C;Species: Gallus gallus (chicken)
C;Decies: Gallus gallus (chicken)
C;Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 21-Jul-2000
C;Accession: A4428
R;Simmons, D.L; Levy, D.B.; Yannoni, Y.; Erikson, R.L.
Proc. Natl. Acad. Sci. U.S.A. 86, 1178-1182, 1989
A;Ittle: Identification of a phorbol ester-repressible v-src-inducible gene. A;Reference number: A41428, MUD:89145206; PMID:2537491
A;Accession: A41428
A;Status: preliminary
A;Nolecule type: mRNA
A;Residues: 1-375 &SIM>
A;Cross-references: GB:J04496; NID:g211435, PIDN:AA448661.1; PID:g211436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                           TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMIQSCKCNYN 356
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180 GKELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEP--RILYNPLQGQKCIVQTTSWS 237
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 233 QCSKTCGTGISTRVINDNPDCKLIKETRICEVRPCGQPSYASLKKGKKCTKTKKKSPSPVR 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FTYAGCSSVKKYRPKYCGSCVDGRCCTPQQTRTVKIRFRCDDGETFTKSVMMIQSCRCNY 352
                                                  CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRF 296
                                                                                                 TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYN 358
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
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295 PVRETYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKARFRCEDGETFSKNVMMIQSCK 354
                                                                                    267 AVRFEYKNCTSVQIYKPRYCGLCNDGRCCTPHNTKTIQVEFRCPQGKFLKKPMMLINTCV 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123 CIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKE 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243 CGTGISTRVTNDNPECRLVKETRICEVRPCGQ-PVYSSLKKGKKCSKTKKSPEPVRFTYA 301
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                                                                                                                                                                                                                                                                                              C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Accession: 138069
C;Accession: 138069
R;Martinerie, C; Huff, V; Joubert, I:; Badzioch, M; Saunders, G; Strong, Oncogene 9; 2729-2731, 1994
A;Title: Structural analysis of the human nov proto-oncogene and expression A;Reference number: 138069; MUID:94336229; PMID:7520150
A;Accession: 138069; MUID:94336229; PMID:7520150
A;Accession: 138069
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Cross-references: EMBL:X78351; NID:9587422; PIDN:CRAS5146.1; PID:9825696
C;Genetics:
A;Genetics:
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C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 17-Mar-2000
C;Accession: T26972
R;Harris, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14 QCLCITFILLHILGQVAATQRCPPQCPGRCPATPPTCAPGVRAVLDGCSCCLVCARQRGB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 DCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220 CGMGFSTRVTNRNRQCEMLKQTRLCMVRPCEQEPEQPTDKKGKKCLRTKKSLKAIHLQFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302 GCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7 RALALVVTLIHLTRLALST - - CPAAC - - HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCSKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186 LAAYRPEATL-----GVEVSD----SSVNCIEOTTEWTACSKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 2; Length 357;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Introns: 28/3; 104/1; 188/1; 259/3
C;Superfamily: thrombospondin type 1 repeat homology
F;203-250/Domain: thrombospondin type 1 repeat homology <THR1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
39.1%; Score 827.5; DB 2;
Best Local Similarity 43.1%; Pred. No. 1.3e-53;
Matches 157; Conservative 48; Mismatches 120;
                                                                                                                                                                            327 CHGNCPQSNNAFF 339
                                                                                                                                                    355 CNYNCPHANEAAF 367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       362 ANEA 365
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T26972
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S0078

Nov protein - chicken

C;Species: Gallus gallus (chicken)

C;Species: Gallus gallus (chicken)

C;Date: 19-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 21-Jul-2000

C;Accession: $20078

R;Joliot, V.; Martinerie, C.; Dambrine, G.; Plassiart, G.; Brisac, M.; Crochet, J.; Perh

R;Joliot, V.; Martinerie, C.; Dambrine, G.; Plassiart, G.; Brisac, M.; Crochet, J.; Perh

R;Joliot, V.; Martinerie, C.; Dambrine, G.; Plassiart, G.; Brisac, M.; Crochet, J.; Perh

R;Joliot, V.; Martinerie, C.; Dambrine, G.; Plassiart, G.; Brisac, M.; Crochet, J.; Perh

A;Reference number: $20078

A;Reference number: $20078

A;Residues preliminary

A;Molecule type: mRNA

A;Residues: 1-351 <JOL>
A;Residues: 1-351 <JOL>
A;Cross-references: EMBL:X59284; NID:g63702; PIDN:ChA41975.1; PID:g63703
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -----KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTT 234
                                                                                                                                                                                                                  RDPCDPHKGLFCDFGSPANRKIGVCTAK-DGAPCIFGGTVYRSGESFQSSCKYQCTCLDG 129
                                                                                                                                                                                                                                                                                                    245
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG---- 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67 TOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDG 126
                                                                                                                                                                                                                                                                            AVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFD 186
                                                                                                                                                                                                                                                                                                                                                                                                    ------TVVGPALAAYRLEDTFGPDPTMI-----RANCLVQTTEWSACSKTCGM 215
                                                                                                                                                                                                                                                                                                                                                                                                                                              GISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLS 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCQHQCTCI 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAYRQEATLGIDVSD-----SSANCIEQTT 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SWSQCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPE 294
                                                                                                              99
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                                                                                                                                11 VAFVVLLALCSRPAVGQNCSGPCRCPDEPAPRCPAGVSLVLDGCGCCRVCAKQLGELCTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GISTRVINDNASCRLEKQSRLCMVRPCEADLEENIKKGKKCIRTPKISKPIKFELSGCTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9 LALVVTLLHLTRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCAKQLNEDCSK
                                                                                                                                                                                                                                                                                                                                                              187 ASEVELTRNNELIAVGKGRSLKRL-PVFGMEPRILYNPLQGQKCIVQTTSWSQCSKTCGT
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                          Length 349;
                          tch 44.8%; Score 947; DB 2; Length 34: al Similarity 46.6%; Pred. No. 2e-62; 174; Conservative 58; Mismatches 101; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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40.2%; Score 851.5; DB 2;
Best Local Similarity 44.0%; Pred. No. 2.1e-55;
Matches 164; Conservative 44; Mismatches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FESLYYRKMYGDM 348
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                        Query Match
Best Local S:
Matches 174,
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Salbiani ring 3 protein - midge (Chironomus tentans)
Cispecies: Chironomus tentans
Cispecies: Cispecies
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                                                                                                                                                                                                                                                                                  1110 YNPFVARCDHVTG-ECR------CPAGWTGPDCQTSCPLGRHGE----GCRHSCQ 1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1207 NG-------DCECIDGWIGPSLCPFGQFGRNCAORCNCRNGASCDRKTGRCECLFGW 1256
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PDASEVELTRNNELLAVGKGR-----SLKRLPVFGMEPRILYNPLQGQKCIVQTTSW 236
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                                                                                                                                                                                                                                                                                                                                                              123 CIDGAVGCIPLCPQELSLPNLGCPNPRLVXVTGQCCEEWVCDEDSIXDPMEDQDGLLGKE
                                                                                                                                                                                                                                                                                                                                                                                                                             1154 CSNGA----SCDRVIGF--CDCPSGFMGKNCESECPEGLWGSNCMKHCLCMHGGECNKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183 LGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQT----TSW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S--QCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLK-----KGKKCSKT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CICPTAEPAGGCSAPLKWDDDKCSCACPAKMEEKKEKCVESGKIWNPNTCECGCAQLNCP
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                                                                                                                                                                                                              TOP----CDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A,Map position: 4
C,Superfamily: unassigned Balbiani ring proteins
                                                      CPAACHCPLEAP-----KCAPG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1369
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                                                           56
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submitted to the EMBL Data Library, October 1998
A;Reference number: 220293
A;Reference number: 220293
A;Reference number: 220293
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Nolecule type: DNA
A;Residues: 1-111 vMIL>
A;Cross-references: EMBL:AL032657; PIDN:CAA21739.1; GSPDB:GN00019; CESP:Y47H9C.4
A;Repetimental source: clone Y47H9C
C;Genetics:
A;Gene: CESP:Y47H9C.4
A;Gene: CESP:Y47H9C.4
A;Gene: CSSP:Y47H9C.4
A;Gene: SO(2; 84/2; 150/1; 238/3; 342/3; 797/1; 851/1; 947/2; 1017/1; 1083/1
C;Superfamily: unassigned ankyrin repeat proteins; ankyrin repeat homology; EGF h
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 V-----C-SCADGHGCDPTTGECICEPGYHGKTCSEKCPDGKYGYGCALDCPKCASGS 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     491
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----SCPCSDASCSKQTGKCLCPLGTKGVS 627
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTY-----AGCLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match

8.2%; Score 174; DB 2; Length 1111;
Best Local Similarity 19.7%; Pred. No. 4.3e-05;
Matches 84; Conservative 33; Mismatches 161; Indels 148; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26 CPAACHCPLE-APKCAPGVGLVR-----DGCGCCKVCAK-QLNEDCSKTQPCDHTKGLEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CSKTCTCVRENTLMCAPNTGFCRCKPGFYGDNCELACSKDSYGPNCEKQAMCDWNHASEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTC----IDGA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----PGCIPL-----CPQELSLPN--LGCP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        492 CDRGWIGHRCEHHCPADIFGANCEKRCKCPKGIĠĊDPIIGECIĊPAGLQGANCDIĠĊPEG
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8.2%; Score 173.5; DB 2; Length 1620;
Best Local Similarity 24.2%; Pred. No. 6.8e-05;
Matches 92; Conservative 33; Mismatches 146; Indels 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 358 NCPHAN 363
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| OY 281 KKGKKCSKTKKSPEPVRFTYAGCLSVKKYRP 311 Db 497 KCKCECSPTITCQAPQILDINTCECKCPVNMLAQKBKCKSPRQWTDSKCLCECSTTPATC 556 | N;Alternate names: sperm-specific membrane protein C;Species: Mus musculus (house mouse) C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 03-Dec-1999 C;Accession: T42215 |
|--|--|
| QY 312KYCGSCVDGRCCTPQLTRIVKMRFRCEDGET-FSKNVMIQSCKCNYNC 359 | R;Gao, Z.; Garbers, D.L. J. Blol. Chem. 273, 3415-3421, 1998 A;Title: Species diversity in the structure of zonadhesin, a sperm-specific membrane pr A;Reference number: Z22080; MUID:98123114; PMID:9452463 |
| Qy 360 P 360 | A;Accession: T42215 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA |
| 10 | A;KeBidues: 1-53/6 <gao> A;KeBidues: 1-53/6 <gao> C;Genetics: EMEL:U97068; NID:g3327420; PID:g3327421; PIDN:AAC26680.1 C;Genetics: A:Genet 724</gao></gao> |
| T13954 MEGP6 protein - rat C.Species: Rattus norvegicus (Norway rat) C.Date: 20-Sep-1999 #semmence revision 20-con-1998 #text shangs 21_ft.1_2000 | ultiple cell adhesion pro |
| C; Accession: T13954 | ı the apical region or |
| iple | Query Match 7.2%; Score 152; DB 2; Length 5376; Best Local Similarity 21.0%; Pred. No. 0.0082; Matches 81; Conservative 39; Mismatches 138; Indels 128; Gaps 19; |
| | Qy 19 TRLALSTCPAACHCPLBAPKCAPGVGLVRDGCGCCKVCAKQLNBDCSKTQPCDHTKGLBC 78 |
| A.Coos-relevences: Embi-Abull542; NID:g3449293; PIDN:BAA32462.1; PID:g3449294 A.Experimental source: strain Sprague-Dawley; brain C.Genetics: A.Gene: MEGF6 | Qy 79 NFGASSTALKGICRAQSEGRPCEYNSRIYQNGESF-QPNCQHQCTCIDGAVGCIP 132 |
| Query Match 7.2%; Score 153; DB 2; Length 1574; Best Local Similarity 21.9%; Pred. No. 0.0021; Matches 97; Conservative 36; Mismatches 133; Indels 176; Gaps 28; | QY 133 L-CPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPME 173 |
| OY 26 CPAACHCPLEAPKCAPGVGLVRDGG | Qy 174 DQDGLLGKELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLGGQKCIVQT 233 |
| OY 51 GCCKVCAKQLNEDCSKTOPCDHTKGLECNFGASSTALKGICR 92 | QY 234 TSWSQCSKTGGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKG 283 |
| QY 93 AQSEGRPCEYNSRIYQNGESPQPNCQHQCTCIDGAVGCIPLCPQ 136 | Qy 284 KKCSKTKKSPEPVRFTYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRT 330 1 |
| QY 137 ELSLPNLGCPNPRLVKVTGQC-CEEWVCDEDSIKDPMEDQDGLLGKELGFDA 187 Db 734 ECFVGTFGVNCSGSCSCVGAPCHRVTGECLCPPGKTGEDCGADCPEGRWGLGCQEI 789 | Qy 331 VKWRPRCEDGETFSKNVMMIQ-SCKC 355 Db 4659 CKEGCICQSGYVLHKNKCMLRIHCDC 4684 |
| QY 188 SEVELTRINBELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCSKTC 243 Db 790CPACEHGASCNPETGTCLCLPGFVGSRCQDTCSAGW 825 | RESULT 12 A39804 |
| OY 244 -GTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTY 300 | thrombospondin precursor - chicken C;Species: Gallus gallus (chicken) C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999 C;Accession: A39804 |
| C-CTPQLTRTVGRFRCEDGETFSK 34 | Rilawler, J.; Duquette, M.; Ferro, P. J. Biol. Chem. 266, 8039-8043, 1991 A.Title: Cloning and sequencing of chicken thrombospondin. A.Reference number: A39804, MUID:91217036; PMID:2022631 |
| CY 346 NVMMIQSCKCNYNCPHANEA 365 Db 919OKPERHAAA 1 1 1 1 1 1 1 1 1 | A,Accession: A39804 A,Gratus: preliminary A,Molecule type: mRNA A,Molecule type: mRNA |
| SULT 11 2215 nadhesin - mouse | A;Cross_references: GB:M0853; NID:g212763; PIDN:AAA51437.1; PID:g212764 C;Superfamily: thrombospondin 1; EGF homology; thrombospondin type 1 repeat homology; vo F;325-383/Domain: von Willebrand factor type C repeat homology vWC> F;386-437/Domain: thrombospondin type 1 repeat homology <thr1> F;442-498/Domain: thrombospondin type 1 repeat homology <thr2></thr2></thr1> |

| <pre>din type 1 repeat ho / <egf> 18; Score 150.5; 1 38; Pred. No. 0.003</egf></pre> | DD 702 DPSDCVPGSITYMPNGCCKTCIHNPNNTVPCS 733 QY 274 Q-PVYSSIKKGKKCSKTKKSPEPVRFTYAGCLSVKKYRPKYC-GSCVD 319 |
|---|--|
| 65 | Db 734 AIPVMKEISYNGCAKNISMNFCAGSCGTFAMYSAQADLD 773 |
| QY 100 CEYNSRIYONGESFOPNCQHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCE 159 | Qy 320 GRCCTPQLTRTVKWRFRCEDGETFSKNVMMIQSCKC 355 |
| 160 EWVCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRI 21 | RESULT 14 |
| 379VCSHSDDSEEGWSPWIKCSVICGSGTQWRGRSCDVIRSACIGPHI 42 | A53612 laminin Blk chain precursor - human |
| DD 427 QTRMCSFKKCDHRIRQDGGWSHWSPWSSCSVTCGVGNITRIRLCNSPIPQMGGKNCVGNG 486 | N./ATTETTHER names : Aginin bi chain; nicein bi chain C.Species: Homo sapiens (man) C.Date: 07-Oct-1994 #sequence_revision 07-Oct-1994 #text_change 05-Nov-1999 |
| 28 | |
| | A;ille: ine complete primary structure for a novel taminin chain, the laminin bik chai A;Reference number: A53612; MUID:94209274; PMID:7512558 A;Accession: A53612 |
| 547 DMCNK-RDCPIDGCLSNPCFPGAECNSYPDGSWSCGP 58 | A;Status: preliminary A;Molecule type: mRNA n.Decidos: 1.1170 2000. |
| RESULT 13 | A, Cross-references: GB:L25541; NID:g510702; PIDN:AAA61834.1; PID:g510703 A;Cross-references: GB:L25541; NID:g510702; PIDN:AAA61834.1; PID:g510703 A;Note: authors translated the codon CGA for residue 124 as Gln, GAG for residue 439 as |
| A42112 mucin-like peptide MLP 2677 - rat C.Species: Rattus norvegicus (Norway rat) | C;Superfamily: laminin-type EGF-like homology C;Keywords: glycoprotein F:117/Dwmsin: eignal segments #etarus predicted (ETG) |
| C. Date: O. Marcus Morreguence revision 18-Nov-1994 #text_change 10-Oct-1997 C. Accession: A42112 | Fil-1/Domain: bignal Bequence #Bratus predicted File 1170/Product: laminin Blk Chain #Bratus predicted MAT> File 1170/Product: laminin Blk Chain #Bratus proficed MAT> |
| R;Xu, G.; Huan, L.J.; Khatri, I.A.; Wang, D.; Bennick, A.; Fahim, R.E.; Forstner, G.G.; J. Biol. Chem. 267, 5401-5407, 1992 A:Title: cDNA for the carboxyl-terminal region of a rat intestinal mucin-like neutide | F,230-512/Odmain: laminin-Cype BGF-ire idmology F;378-427/Domain: laminin-type BGF-like homology LEG> F:530-476/Domain: laminin-type BGF-like homology F:530-576/Domain: laminin-type BGF-like homology |
| | Ouery Match 7.0%; Score 147.5; DB 2; Length 1170; |
| A;Status: preliminary A;Molecule type: nucleic acid; protein | Indels |
| Argestudes: 1-03. AAU1. Argestudes: 1-10. AAU1. Argestudes: Sequence inconsistent with the nucleotide translation | 29 ACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLN |
| Ajvote: Bequence extracted from NUEL Dackbone (NUELP:87420) C;Superfamily: von Willebrand factor type C repeat homology F:582-650/Domain: von Willebrand factor type C repeat homology vVWCs | DD 249 SCFCHGHADRCAPKPGASAGSTAVQVHDVCVCQHNTAGPNCERCAPFYNNKPWRFABGGD 308 Ov 64 CSKTODCHHTKGT.ECNPGASSTAIKGTCPAOSEGRPCEVNS 104 |
| Chigary Match 7 19. Concent 150. Toward Con. | TO THE PROPERTY OF THE PROPERT |
| 477 | 309 AHECQRCDCNGHSEICHFDPAVFAASQGAIGGVCDNCKDHIEGKNCERCQLHIF |
| vactve 40; mismacches | DD 363 RNRRPGASIQETC-ISCECDPDGAVAGAPCDPVTGQCVC 400 |
| Db 419 TCPAHRQYQACGPSEEPTCQSSSPKNSTLLVEGCFCPEGTTKFAPGYDVCVKICGCVGPD 478 | Qy 164 DEDSIXDPMEDQDGLLGKELGFDASBVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNP 223 |
| Qy 53CKVCCKVCAKQLNEDCSKTQPCDH 72 | Db 401 KEH 403 |
| Db 479 NVPREFGEHFEFDÜXDCVCLEGGSGIVCQPKKCARGNLTTCEEDGTYLVVEADPDDKCCN 538 | Qy 224 LQGQKCIVQTTSWSQCSKTCGTGISTRVTNDNPECRLVKETRICEV 269 |
| OY 73 TKGLECNFGASSTALKGICRAGSEGRPCEYNSRIYQNGESFQP 115 | 404 VQGERCDLCKPGF-TG |
| 116 NCQHQCTCIDGAVGCIPLCPQELSLPNLGCPNP-RLVKVTGQCCEEWVCD 16 | LPNVGPKCDQCAPYHWKLASGQGCEPCACDPHNSLSPQCNQFTGQCPCRE |
| Db 599 NKCQDCVCTDSMDNSTQLNVISCTHVP-CNISCSSGFELVEVFGECCKKCQQT 650 | Qy 318 -VDGRCCTPQLTRTVKWRPRCEDGETPSKNVWMIQSCKCNY 357 |
| QY 165 EDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAVGKGRSLKRLPVFGM 215 | Db 503 GFGGLMCSAAAIRQCPD-RIYGDVAIGCRACDCDF 536 |
| 명 단 | RESULT 15 T09059 |
| | |

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notch4 - mouse
C;Species: Mus musculus (house mouse)
C;Species: Mus musculus (house mouse)
C;Date: Il-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 08-Sep-2002
C;Accession: T09059
R;Rowen, L.; Mahairas, G.; Qin, S.; Ahearn, M.E.; Dankers, C.; Lasky, S.; Loretz, C.; Sc Bubmitted to the EMBL Data Library, October 1997
A;Reference number: Z16543
A;Accession: T09059
A;Accession: T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Map position: 17
A: Map position: 17
A: Introns: 22/1; 49/2; 148/1; 264/1; 305/1; 384/1; 436/1; 501/1; 539/1; 577/1; 618/1; 67
A: Introns: 22/1; 1761/3
C: Superfamily: notch protein; ankyrin repeat homology; BGF homology
C: Keywords: receptor; signal transduction
F: S14-545/Domain: EGF homology cEGF>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 23.4%; Pred. No. 0.0086;
Matches 94; Conservative 28; Mismatches 141; Indels 138; Gaps 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             72 HTKGLE------CNFGASSTALKG----ICRAQSEGRPCEY---NSRIYON 109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   574 CLPGFEGPHCEKEVDECLSDPCPVGASCLDLPGAFFCLCRPGFTGQLCEVPLCTPNMCQP 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        110 GESFQPNCQHQ-----CTCIDGAVGCIPL------CPQELSLPNLGCPNPRLVKVT 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        155 GOCCEEWVCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELLAVGKGRSLKRLPVFG 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             690 GGCIST-PCAHGGTCHPQPS----GYNCTCPAGYMGLICSEEVTACHSGPC----- 735
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28 AACHCPLEAPK--CAPGVGLVRDGCGCCKVCAKQLNEDCSKT-----QP----CD 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       818 CODTPRGARCL ---- CSPGYTGSSCOTLIDLC-ARKPCPH 852
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Search completed: April 22, 2004, 17:59:22 Job time : 17.5434 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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OM protein - protein search, using sw model

Run on:

April 22, 2004, 17:52:34 ; Search time 10.5276 Seconds (without alignments) 1884.444 Million cell updates/sec

Title: Perfect score: Sequence:

US-09-495-448A-4 2116 1 MSSRIARALALVVTLIHLTR......ANBAAFPFYRLFNDIHKFRD 381

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

141681 Total number of hits satisfying chosen parameters:

141681 seqs, 52070155 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_42:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| | Description | 22 homo | mus m | Q9es72 rattus norv | P19336 gallus gall | rattus | P29268 mus musculu | P29279 homo sapien | | | P28686 gallus gall | | | | | Q9qzq5 rattus norv | O95388 homo sapien | | Q99pp0 rattus norv | 095389 homo sapien | homo | mus m | Q9jhc6 rattus norv | Q03376 chironomus | P57999 oryctolagus | | mus mus | | rattus | gallı | homo sa | mus 1 | S | 35448 |
|------------|-------------|------------|------------|--------------------|--------------------|----------|--------------------|--------------------|------------|----------|--------------------|-----------|-----------|-----------|-----------|--------------------|--------------------|------------|--------------------|--------------------|------------|------------|--------------------|-------------------|--------------------|------------|---------|------------|--------|-------|---------|-------|------------|------------|
| | ID | CYR6 HUMAN | CYR6 MOUSE | CYR6_RAT | CE10 CHICK | CIGF RAT | CTGF_MOUSE | CTGF_HUMAN | CTGF_BOVIN | CTGF PIG | NOV CHICK | NOV COLUA | NOV_HUMAN | NOV XENLA | NOV MOUSE | NOV_RAT | WSP1 HUMAN | WSP1 MOUSE | WSP1_RAT | WSP3 HUMAN | WSP2_HUMAN | WSP2_MOUSE | WSP2 RAT | BAR3_CHITE | ZAN_RABIT | LMA2_HUMAN | | TSP2_CHICK | | | | | LMB3_HUMAN | TSP1_XENLA |
| | DB | - | Н | H | н | н | Н | н | Н | Н | Н | Н | Н | Н | н | Н | Н | н | Н | ~ | н | н | Н | Н | н | Н | Н | н | н | - | Н | Ч | rt | Н |
| | Length | 381 | 379 | 379 | 375 | 347 | 348 | 349 | 349 | 349 | 351 | 353 | 357 | 343 | 354 | 351 | 367 | 367 | 367 | 354 | 250 | 251 | 25 | 70 | 28 | 3110 | 37 | 17 | 837 | 45 | 52 | 96 | 1172 | 1173 |
| * Ouery | a ! | 6 | ä | ä | ٠ | 'n | 45.0 | 4. | 44.1 | | 40.2 | 40.1 | ٠. | | 38.8 | | | 35.8 | | 29.0 | | 4. | ۳. | ٠ | ٠ | ٠ | • | ٠ | • | • | ٠ | 6.9 | 6.8 | 9 |
| | Score | _ | o, | 1929 | φ | σ | 952.5 | 947 | 933 | σ | 851.5 | | 827.5 | | ന | 818.5 | 167 | 758 | 758 | | 523.5 | | 490 | - | 153.5 | 152 | - | 150.5 | - | 147.5 | 146 | - | 144.5 | 143 |
| Result | No. | ч | ~ | m | 4 | ហ | ø | 7 | œ | σ | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 56 | 27 | 28 | 29 | 30 | 31 | 32 | 33 |

| Q9r118 mus musculu P98088 homo sapien Q02817 homo sapien Q920c1 mus musculu Q28178 bos taurus Q946150 brachydanio Q28833 sus scrofa P07207 drosophila P24014 drosophila P83110 homo sapien Q965p6 homo sapien |
|---|
| HRA1 MOUSE MUSA HUMAN MUCZ HUMAN MUCZ HUMAN MALI MOUSE TSP1 BOVIN NTCI BRARE VWF FIG NOTC DROME HRA3 HUMAN SRCZ HUMAN |
| нанананана |
| 11283 5173 5173 11447 11170 1208 1208 1504 1504 |
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| 141 141 141 139 139 139 138.5 137.5 137.1 |
| W U U U U U U U U U U U U U U U U U U U |

ALIGNMENTS

RESULT 1

| CYR LD AC TT TT TT | HUMAN STANDARD; PRT; 381 AA. CYRE HUMAN STANDARD; PRT; 381 AA. 000652; 014994; 043775; Q9BZL7; 15-UUL-1998 (Rel. 36, Created) 15-UUL-1998 (Rel. 36, Last sequence update) 10-OCT-2003 (Rel 36, Last sequence update) |
|--------------------------|--|
| 388 | in precursor (Cy ke growth factor |
| N S | ccni or gigi. |
| 88 | Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo. |
| X X |)=9606; |
| Z Z | SEQUENCE FROM N.A. |
| RA: | C., von der |
| Z Z | to the |
| R G | SEQUENCE FROM N.A. |
| X | 7280750; PubMed=9135077; |
| 2 : | Jay P., Berge-Lefranc J.L., Marsollier C., Mejean C., Taviaux S., |
| \$ £ | CACAN FORTON STATE OF |
| 4 6 | ductore rumediace early gene, |
| 13 | Oncogene 14:1753-1757(1997). |
| RN | [3] |
| RP | SEQUENCE FROM N.A. |
| X | |
| & 1 | ., Viegas-Pequignot E., Nguyen V.C., Perbal B.; |
| X E | 5 |
| Z 2 | Coll 1:0 |
| RN | [4] |
| RP | SEQUENCE FROM N.A. |
| RC | TISSUE=Placenta; |
| Z. | |
| 2 2 | Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases. |
| 2 G | A WOOR SOMETICE |
| 2 | Bi A.B., Yu L.; |
| Æ | ਧ |
| Z. | [6] |
| RP | FROM N.A. |
| 8 8 | Schuetze N., Lechner A., Groll C., Koehrle J., Jakob F.; |
| ı E | Vicamilii D, Berum and Cycoxines in tecar |
| 굺 | Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases. |
| RN | |
| R. | INCE FROM N.A. |
| 8 E | Leng E., Tal G., Estable M., Liu J., Chow C., Sadowski 1.; "Organization and expression of the CYR61 gene in normal human |
| RT | |
| R | Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases. |
| Z 6 | [8] |
| ¥. | SECOBNCE TROP N.A. |

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MEDINE-21233087; PubMed=11287419;

MEDINE-21233087; PubMed=11287419;

Grzeszkiewicz T.M., Kirschling D.J., Chen N., Lau L.F.;

Grzeszkiewicz T.M., Kirschling D.J., Chen N., Lau L.F.;

Grzeszkiewicz T.M., Kirschling D.J., Chen N., Lau L.F.;

Than a pha vbeta 5 and enhances mitogenesis through integrin alpha vbeta

Than a carboxyl-terminal domain. The carboxyl-termi
TISSUE-Lung, Placenta, and Skin;

XX MEDLINE=22388257; PubMeda=1247932;
StrausBearg R.L., Felingold E.A., Garus. C.M., Schuler G.D.,
StrausBearg R.L., Colling F.S., Wagner L., Shemmen C.M., Schuler G.D.,
XX Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marushna K., Farmer AA., Rubin G.M., Hong L.,
Na Staplecon M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Raha S.S., Morley K.C., Halle S., Garcia A.M., Gay L.J., Hulyk S.W.,
Nilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Anting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Nhiting W., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodiguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Chenration and initial analysis of more than 15,000 full-length
Human and mouse cDNA sequences,"
101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INTERACTION WITH INTEGRIN ALPHA-6/BETA-1.
MEDLINE=20387398; PubMed=10821835;
Chen N., Chen C.-C., Lau L.F.;
"Adhesion of human skin fibroblasts to Cyr61 is mediated through integrin alphaébetal and cell surface heparan sulfate proteoglycans.";
J. Blol. Chem. 275:24953-24961(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen C.-C., Mo F.-E., Lau L.F.; The anglogenic factor Cyrel activates a genetic program for wound healing in human skin fibroblasts."
J. Biol. Chem. 276:47329-47337(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INTERACTION WITH INTEGRIN ALPHA-IIB/BETA-3.
MEDLINE-99377072; PubMed=10446209;
Jedsadayanmata A., Chen C.-C., Kireewa M.L., Lau L.F., Lam S.C.;
"Activation-dependent adhesion of human platelets to Cyr61 and "Activation-dependent adhesion of human platelets to Cyr61 and Fispl2/mouse, connective Lissue growth factor is mediated through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kireeva M.L., Lam S.C., Lau L.F.; "Adhesion of human umbilical vein endothelial cells to the immediate-early gene product Cyr61 is mediated through integrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INTERACTION WITH INTEGRIN ALPHA-V/BETA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    integrin alpha(IIb)beta(3).";
J. Biol. Chem. 274:24321-24327(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION IN WOUND HEALING.
MEDLINE=21601638; PubMed=11584015;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biol. Chem. 273:3090-3096(1998)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          alphavbeta3
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SUBUNIT: Interaction with integrins is heparin- and cell-type-dependent and promotes cell adhesion. In skin fibroblasts it

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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genew; HONC:2654; CYR61.

MIM, 602369; --

RGO, GO:000828; P:cell proliferation; TAS.

RGO; GO:0007345; P:embryogenesis and morphogenesis; TAS.

InterPro; IPR006208; Cyg knot.

InterPro; IPR006207; Cyg knot.

InterPro; IPR000884; TSP1.

R InterPro; IPR001007; VWP.C.

R Pfan; PP00017; Cyg knot; 1.

R Pfan; PP00019; IRBP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VWFC.
TSP TYPE-1.

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CYR61 PROTEIN.
IGFBP.
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CTCK 2; 1.
; IGF BINDING; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL, Y12084; CAA72802.1; --
EMBL, Y120515; AAB58319.1; --
EMBL, Y11307; CAA72167.1; --
EMBL, AF0031994; AAB61240.1; --
EMBL, AF031385; AAB84227.1; --
EMBL, AF031385; AAB84227.1; --
EMBL, AF071385; AAB84227.1; --
EMBL, BC001271; AA401271.1; --
EMBL, BC001271; AA401271.1; --
EMBL, BC016525; AA409199.1; --
EMBL, BC01654; EMBL, BC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS01165; CTCK_1; 1. PROSITE; PS01225; CTCK_2; 1. PROSITE; PS00222; IGF EIDINN PROSITE; PS50092; TSPI; 1. PROSITE; PS501208; VMFC_1; 1. Chemotaxis; Cell adhesion; G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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Pfam; PF00090; tsp_1; 1
Pfam; PF00093; vwc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMART; SM00041; CT; 1.
SMART; SM00121; IB; 1.
SMART; SM00209; TSP1; 1
SMART; SM00214; VWC; 1.
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Matches 379; Conserv
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CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEFWVCDEDSIKDPMEDQDGLLG 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                     KTCGTGISTRVINDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPBPVRFTY 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMIQSCKCNYNCP 360
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                                                                                                                          NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQ 120
                                                                                                                                                              61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
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MSSRIARALALVVTLIHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
                                          MEDLINE=20387398; PubMed=10821835;
MEDLINE=20387398; PubMed=10821835;
Chen N., Chen C.C., Lau L.F.;
"Adhesion of human skin fibroblasts to Cyr61 is mediated through integrin alpha 6beta 1 and cell surface heparan sulfate proteoglycans.";

"Biol. Chem. 275:24953-24961(2000).

-!- FUNCTION: Promotes cell proliferation, chemotaxis, angiogenesis and cell adhesion. Appears to play a role in wound healing by upregulating, in skin fibroblasts, the expression of a number of genes involved in angiogenesis, inflammation and matrix remodeling including VEGA-C, MMP1, MMP3, TIMP1, uPA, PAI-1 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
01-NOV-1990 (Rel. 16, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
CYR61 protein precursor (Cysteine-rich, angiogenic inducer, 61)
CYR61 protein precursor (Cysteine-rich, angiogenic inducer, 61)
CYR61 OR IGFBP10 OR CCN1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=90287146; PubMed=2355916;
O'Brien T.P., Yang G.P., Sanders L., Lau L.F.;
"Expression of cyr61, a growth factor-inducible immediate-early
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       growth factor-inducible
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STATAIR—AJA TISSUB-Embryonic fibroblast;
MEDLINE=91288203; Wubmed=2062642;
Latinkic B.V., O'Brien T.P., Lau L.F.;
"Promoter function and structure of the gimmediate early gene cyrél.";
Nucleic Acids Res. 19:3261-3267(1991).
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Mol. Cell. Biol. 10:3569-3577(1990)
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integrins alpha-3 and alpha-5 (By similarity). Cyr61-mediated gene regulation is dependent on heparin-binding (By similarity). Down-regulates the expression of alpha-1 and alpha-2 subunits of collagen type-1 (By similarity). Promotes cell adhesion and adhesive signaling through integrin alpha-6/beta-1, cell migration through integrin alpha-1/beta-5 and cell proliferation through integrin alpha-v/beta-3 (By similarity).

-!- SUBUNIT: Interaction with integrins is heparin- and cell-type-dependent and promotes cell adhesion (By similarity).
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: LOW IN KIDNEY, ADDENAL GLAND, TESTES, BRAIN, THALL THALL THALL THALL THALL THERET, UTERUS, AND SKELETAL MUSCLE, HIGHEST TAN THALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DR PIR, A35669; A35669.

DR MGD; MG1:88613; Cyr61.

DR MGD; MG1:88613; Cyr61.

DR MGD; MG1:88613; Cyr61.

DR InterPro; IPR006208; Cyg_knot_C.

DR InterPro; IPR000867; Insl_gro_fac_pr.

DR InterPro; IPR001807; VWFC.

DR Pfam; PF00109; VWFC.

DR Pfam; PF00199; VWFC.

DR Pfam; PF00199; VWFC.

DR SWART; SW00121; IB; I.

DR SWART; SW00121; IB; I.

DR SWART; SW00209; TSP1; I.

DR SWART; SW00209; TSP1; I.

DR SWART; SW00209; TSP1; I.

DR PROSITE; PS01185; CTCK.

DR PROSITE; PS01185; CTCK.

DR PROSITE; PS01189; VWFC.

DR PROSITE; PS01180; VWFC.

DR PRO
                                                                                                                                                                                                                                                                                                                    -!- DEVELOPMENTAL STAGE: EXPRESSED FROM G(0)/G(1) THROUGH MID-G(1) IN NORMAL CELLS, AND AT A CONSTANT LEVEL IN RAPIDLY GROWING CELLS.
-!- INDUCTION: By growth factors.
-!- SIMILARITY: Belongs to the COW family.
-!- SIMILARITY: Contains 1 IGFBP domain.
-!- SIMILARITY: Contains 1 VWFC domain.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VWFE-1.
HEPARIN-BINDING.
CTCK.
BY SIMILARITY.
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CYR61 PROTEIN.
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Conservative 10;
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312
315
320
379 AA;
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90.9%; Pred. No. 1.3e-141;
ive 10; Mismatches 19;
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HEPARIN-BINDING (1CTCK.
BY SIMILARITY.
BY SIMILARITY.
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BY SIMILARITY.
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InterPro; IPR006207; Cys knot.
InterPro; IPR000867; Insi_gro_fac_pr.
InterPro; IPR000864; TSP1.
InterPro; IPR001007; VWF_C.
Pfam; PF002109; Cys knot; 1.
Pfam; PF002109; IGFBP; 1.
Pfam; PF00090; tsp_l; 1.
Pfam; PF00090; tsp_l; 1.
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SWART; SMOO121; IB; 1.
SWART; SMOO121; IB; 1.
SWART; SMOO121; IB; 1.
SWART; SMOO14; VWC; 1.
PROSITE; PSO1185; CTCK 1; 1.
PROSITE; PSO1225; CTCK 2; 1.
PROSITE; PSO1225; CTCK 2; 1.
PROSITE; PSO1225; TSP1; 1.
PROSITE; PSO1229; TSP1; 1.
PROSITE; PSO1249; VWC 2; 1.
Chemotaxis; Cell adhesion; Growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41687 MW;
                                                                                                                                                                               EMBL; AF218568; AAG14964.1;
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Best Local Similarity
Matches 348; Conserv
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DISULFID
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I mmediate early growth regulatory gene CYR61.";

I Biol. Chem. 25:28929.8036(200).

I Capulating, in akin fibrolates, the expression of a number of genes involved in angiogenesis, inflammation and matrix remodeling including VEGA-A, VEGA-C, MMP1, MMP3, TIMP1, UPA, PAI-1 and integrine alpha-3 (By similarity). Cyr61-mediated gene regulation is dependent on heparin-binding (By similarity). Downregulates the expression of alpha-1 and alpha-2 subunits of collagen type-1 (By similarity). Promotes Cell adhesion and adhesive signaling through integrine alpha-1/beta-5 and cell proliferation through integrin alpha-1/beta-5 and cell proliferation through integrin alpha-1/beta-5 and cell proliferation through integrin alpha-1/beta-3 (By similarity).

I SUBUNIT: Interaction with integrins is heparin- and cell-type-dependent and promotes cell adhesion (By similarity).

I SUBLIARITY: Contains 1 IGFBP domain.

I SIMILARITY: Contains 1 INFC domain.

I SIMILARITY: Contains 1 INFC domain.
                                                                                                                                                                                                      121 CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDL-- 178
                                                                                                                                                                                                                                                                   181 KELGFDASEVELTRNNELLAVGKGRSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ 238
                                                                                                                                                                                                                                                                                            --LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ 236
                                                                                                                                                                                                                                                                                                                                                         CSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF 298
                                                                                           NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQ 120
                                                                                                                                  61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYONGESFOPNCKHO 120
                                                                                                                                                                               CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                   CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRF 296
                                                                                                                                                                                                                                                                                                                                                                                                                                               TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYN 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356
         9
                                              9
                                       MSSSTFRTLAVAVTLHTTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCCKVCAKQL
      MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
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TSSUB-Lung;
MEDLINE=20435857; PubMed=10852911;
Albrecht C., von Der Kammer H., Mayhaus M., Klaudiny J., Schweizer Nitsch R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-007-2003 (Rel. 42, Last annotation update)
CYR61 protein precursor (Cysteine-rich, angiogenic inducer, 61)
(Insulin-like growth factor-binding protein 10).
CYR61 OR IGFBP10 OR CCN1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      379 A.A.
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Q9ES72;
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CYR6_RAT
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                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Archosauria, Aves, Neognathae, Galliformes, Phasianidae, Phasianinae,
Gallus.
                                                                     (Rel. 16, Created)
(Rel. 16, Last sequence update)
(Rel. 42, Last annotation update)
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VWFC.
TSP TYPE-1.
                                                      375 AA
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BY SIMILARITY.
BY SIMILARITY.
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BY SIMILARITY.
BY SIMILARITY.
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InterPro; IPR006208; Cys knot.
InterPro; IPR006208; Cys knot.
InterPro; IPR000867; Insl_gyro_fac_pr.
InterPro; IPR000867; Insl_gyro_fac_pr.
InterPro; IPR001007; VWF.C.
Pfam; PF000107; Cys_knot; I.
Pfam; PF00019; IGFBP; I.
Pfam; PF00019; IGFBP; I.
Pfam; PF00019; ISP; I.
SWART; SW00121; IB; I.
SWART; SW00211; IB; I.
SWART; SW00214; VWC; I.
SWART; SW00214; VWC; I.
PROSITE; PS01125; CTCK_1; I.
PROSITE; PS01125; CTCK_2; I.
PROSITE; PS01225; CIGF_BINING; I.
PROSITE; PS01209; TSPI; I.
PROSITE; PS01209; TSPI; I.
PROSITE; PS01209; TSPI; I.
PROSITE; PS01209; WWFC_1; I.
PROSITE; PS01209; WWFC_2; I.
Growth factor binding; Signal.
357 CPHPNEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                                                                        EMBL; J04496; AAA48661.1; -.
                                                                                                 CEF-10 protein precursor
                                                      STANDARD;
                                                                                                                   Gallus gallus (Chicken)
                                                                                                                                                                                                                                                                                                                                                                                   A41428.
                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                    NCBI_TaxID=9031;
                                                                       01-NOV-1990
                                                                                01-NOV-1990
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                                                                                         10-OCT-2003
                                                      CHICK
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CE10 CHI
P19336;
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Marks S.C. Jr., Owen T.A., Popoff S.N.;
"Cloning the full-length cDNA for rat connective tissue growth factor:
implications for skeletal development.";
J. Cell. Biochem. 77:103-115(2000).
                                                                                                                                                                                                                                                                     60 LNEDCSRIQPCDHTKGLECNFGASPAATNGICRAQSEGRPCEYNSKIYQNGESFQPNCKH
                                                                                                                                                                                                                                                                                                                                                                  120 QCTCIDGAVGCIPLCPQELSLPNLGCPSPRLVKVPGQCCEEWVCDES--KDALBELEGFF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   178 SKEFGLDASEGELTRNNELIAIVKG-GLKMLPVFGSEPQSRAFENP----KCIVQTTSWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    233 QCSKTCGTGISTRVINDNPDCKLIKETRICEVRPCGQPSYASLKKGKKCTKTKKSPSPVR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293 FTYAGCSSVKKYRPKYCGSCVDGRCCTPQQTRIVKIRFRCDDGETFTKSVMMIQSCRCNY
                                                                                                                                              1 MSSRIARALALVVTLIHLTRLAL-STCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQ
                                                                                                                                                                                          1 MGSAGARP-ALARALLCLARLALGSPCPAVCQCPARAPQCAPGVGLVPDGCGCCKVCAKQ
                                                                                                                                                                                                                                           60 LNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQH
                                                                                                                                                                                                                                                                                                                                                                                                                                     180 GKELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEP--RILYNPLQGQKCIVQTTSWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     238 QCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVR
                                                                                               Gaps
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBL_TaxID=10116;
                                                                                          12;
                                                 Length 375;
                                              Query Match 80.1%; Score 1695; DB 1; Length 3
Best Local Similarity 81.0%; Pred. No. 1.4e-123;
Matches 311; Conservative 20; Mismatches 41; Indels
40651 MW; 95F28553BE35D5AE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      QPRIES; Q9WVS1;
28-FBB-2003 (Rel. 41, Created)
28-FBB-2003 (Rel. 41, Last sequence update)
28-FBB-2003 (Rel. 42, Last sequence update)
Connective tissue growth factor precursor.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            358 NCPHANEAAFPFYRLFNDIHKFRD 381
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375 AA;
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PERCENCE FROM N.A.

SEQUENCE FROM N.A.

MEDIATE-21388257; PubMed=12477932;

Strauberg R.L., Feingold B.A., Grouse L.H., Derge J.G.,

Rausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Ratschul S.F., Zeeberg B., Buetow K.H., Schefer C.F., Bhat N.K.,

Aptschul S.F., Zeeberg B., Buetow K.H., Schefer C.F., Bhat N.K.,

Richenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Raplecon M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Raha S., McWann P.J., McKernan K.J., Abramson R.D., Mullahy S.J.,

Richards S., Morley K.C., Hale S., Garcina A.M., Gabbs R.A.,

Richards S., Worley K.C., Hale S., Garcina A.M., Gabbs R.A.,

Villalon D.K., Mazny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Rhyting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rhyting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Ratcrifield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rochiguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Generation and initial analysis of more than 15,000 full-length
                                FIYAGCLSVKKYRPKYCGSCVDGRCCIPQLTRIVKWRFRCEDGETFSKNVMMIOSCKCNY 357
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MEDINE=97327410; PubMed=9184077;
Kireeva M.L., Latinkic B.V., Kolesnikova T.V., Chen C.C., Yang G.P.,
Abler A.S., Lau L.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=99182484; PubMed=10082563;
Babic A.M., Chen C.C., Lau L.F.;
"Fisp12/mouse connective tissue growth factor mediates endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDINE-91229699; PubMed=2029337;
Brunner A., Chinn J., Neubauer M.G., Purchio A.F.;
"Identification of a gene family regulated by transforming growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=91363290; PubMed=1888698; Ryseck R.-P., Mactei M.-G., Bravo R.; Ryseck R.-P., Macdonald-Bravo H., Mattei M.-G., Bravo R.; Structure, mapping, and expression of fisp-12, a growth factorinducible gene encoding a secreted cysteine-rich protein."; Cell Growth Differ. 2:225-233(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Abler A.S., Lau L.F.; "Cyrél and Fispl2 are both ECM-associated signaling molecules: "Cyrél and Fispl2 are both ECM-associated signaling metabolism, and localization during development."; Exp. Cell Res. 233:63-77(1997).
                                                                                                                                                                                                                                                                                                                                                   P29268; Q922U0;
01-DBC-1992 (Rel. 24, Created)
10-DBC-1093 (Rel. 41, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation update)
Connective tissue growth factor precursor (FISP-12 protein)
(Hypertrophic chondrocyte-specific protein 24).
CTGF OR CCN2 OR FISP12 OR FISP-12 OR HCS24.
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                                                                                                                                                                                                                                                                                                                            348 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          factor-beta.";
DNA Cell Biol, 10:293-300(1991);
                                                                                                                   NCPHANEAAFPFY -- RLFNDI
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                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Mouse)
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SEQUENCE FROM N.A.
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SEQUENCE FROM N.A.
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298
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                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the SWBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
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CONNECTIVE TISSUE GROWTH FACTOR
IGFED.
VWFC.
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46.2%; Pred. No. 1.4e-66;
ive 58; Mismatches 107; Indels
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HEPARIN-BINDING (BY CTCK.
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InterPro; IPR006207; Cys knot.
InterPro; IPR000867; Insl_gro_fac_pr.
InterPro; IPR000864; TSP1.
InterPro; IPR001007; WWF C.
Pfam; PF00007; Cys knot; I.
Pfam; PF00199; ISPB; I.
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SMART; SM00101; CT; 1.
SMART; SM00121; IB; 1.
SMART; SM00129; TSP; 1.
SMART; SM00219; VWC; 1.
PROSITE; PS01188; CTCK, 1; 1.
PROSITE; PS0125; CTCK, 2; 1.
PROSITE; PS01225; CTCK, 2; 1.
PROSITE; PS01225; TGF BINDING; 1.
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EMBL; AB023068; BAA82125.1; -.
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PROSITE; PS00222; IGF BINDING
PROSITE; PS50092; TSP1; 1.
PROSITE; PS50184; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
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Best Local Similarity 46.2%
Matches 176; Conservative
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347 AA;
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CONFLICT
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                                                                                                                        -!- TISSUE SPECIFICITY: TESTIS, SPLEEN, KIDNEY, LUNG, HEART, AND BRAIN (LOWEST LEVEL IN TESTIS AND HIGHEST IN LUNG).
-!- INDUCTION By growth factors.
-!- SIMILARITY: Belongs to the CCN family.
-!- SIMILARITY: Contains 1 IGFBP domain.
-!- SIMILARITY: Contains 1 TVSP type-1 domain.
-!- SIMILARITY: Contains 1 TVSP type-1 domain.
-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
cell adhesion and migration through integrin alphavbeta3, promotes endothelial cell survival, and induces angiogenesis in vivo.";

endothelial cell survival, and induces angiogenesis in vivo.";

1- FUNCTION: Bajol. 19:2588-2566(1999)

1- FUNCTION: Major connective tissue mitoattractant secreted by vascular endothelial cells. Promotes proliferation and differentiation of chondrocytes (By similarity). Mediates heparinand divalent cation-dependent cell adhesion in many cell types including fibroblasts, myofibroblasts, endothelial and epithelial cells (By similarity). Enhances fibroblast growth factor-induced DNA synthesis (By similarity).

-I- SUBGUELLULAR LOCATION: Found in the extracellular matrix and as a soluble form.
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                                                                                                                                                                                                                                                                                     PROSITE; PS01185; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS00225; IGF BINDING; 1.
PROSITE; PS00329; TSPI, 1.
PROSITE; PS01208; VWFC 1; 1.
PROSITE; PS01208; VWFC 2; 1.
Cell adhesion; DNA synthesis; Extracsignal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     237 SOCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPV 296
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Umbilical vein endothelial cells;
MEDLINE=9137462; PubMed=1654338;
MEDLINE=9137462; PubMed=1654338;
MCDINE=9137462; PubMed=1654338;
MCOnnective tissue growth factor: a cysteine-rich mitogen secreted by human vascular endothelial cells is related to the SRC-induced immediate early gene product CEF-10.";
J. Cell Biol. 114:1285-1294(1991).
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                                                                                                                                                                                                                                                                                                                    58 KOLNEDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYONGESFOPNC
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01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Connective tissue growth factor precursor (Hypertrophic chondrocyte-
specific protein 24).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                      41;
                                                                                                                                                                                          ch 45.0%; Score 952.5; DB 1; Length 348; ll Similarity 46.6%; Pred. No. 2.1e-66; Conservative 57; Mismatches 106; Indels 41;
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
E > K (IN REF. 1).
W, 4D786D9089174049 CRC64;
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MEDLINE=93187114; PubMed=1293144;
Igarashi A., Bradham D.M., Okochi H., Grotendorst G.R.;
"Connective Lissue growth factor.";
J. Dermatol. 19:642-643(1992)
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  292 BY
306 BY
322 BY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Note=No experimental confirmation available,
-!- SIMILARITY: Belongs to the CCN family.
-!- SIMILARITY: Contains 1 10FBP domain.
-!- SIMILARITY: Contains 1 VWFC domain.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                         MEDLINE=22442376; PubMed=12553878;
Ball D.K., Rachfal A.W., Kemper S.A., Brigstock D.R.;
Ball D.K., Rachfal A.W., Kemper S.A., Brigstock D.R.;
Ball D.K., Rachfal A.W., Kemper S.A., Brigstock D.R.;
The heparin-binding 10 kDa fragment of connective tissue growth factor (CTGF) containing module 4 alone stimulates cell adhesion.";
J. Endocrinol. 176:R1-R7(2003).
-!- FUNCTION: Major connective tissue mitoattractant secreted by vascular endochelial cells. Promotes proliferation and differentiation of chondrocytes. Mediates heparin- and divalent cation-dependent cell adhesion in many cell types including fibroblasts, myofibroblasts, endothelial and epithalial cells. Enhances fibroblast growth factor-induced DNA synthesis.
       MEDICINE=77207446; PubMed=9054739; Oemar B.S., Werner A., Garnier J.M., Do D.D., Godoy N., Nauck M., Marz W., Rupp J., Pech M., Luescher T.F.; "Human connective tissue growth factor is expressed in advanced
                                                                                                                                                                    TISSUE—Chondrocytes;
MEDLINE=20080284; PubMed=10614647;
MRDLINE=20080284; PubMed=10614647;
MAkanishi T., Nishida T., Shimo T.,
Tamatani T., Tezuka K., Takigawa M.;
"Effects of CTGF/Hcs24, a product of a hypertrophic chondrocytes specific gene, on the proliferation and differentiation of chondrocytes in culture.";
Endocrinology 141:264-273(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SUBUNIT: Monomer.
-!- SUBURIT: Monomer.
-!- SUBCELLUIAR LOCATION: Found in the extracellular matrix and agoluble form (By similarity).
-!- ALTERNATIVE PRODUCTS:
Event=Alternative splicing; Named isoforms=2;
Name=1; Synonyms=Long;
IsoId=P29279-1; Squence=Displayed;
IsoId=P29279-2; Sequence=VSP_002460;
IsoId=P29279-2; Sequence=VSP_002460;
                                                                                                                                Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X78947; CAA55544.1; -.
EMBL; AL354866; CAC44023.1; -.
                                                                atherosclerotic lesions.";
Circulation 95:831-839(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M92934; AAA91279.1; -.
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Genew, HGNC:2500; CTGF.
MIM; 121009; -.
                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246 GISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLS 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    306 VKKYRPKYCGSCVDGRCCTPQLTRTVKARFRCEDGETFSKNVMMIQSCKCNYNCPHANEA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99
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InterPro; IPR000884; TSP1.

Refam; PF001007; VWF_C.
Pfam; PF00107; Cyg_knot; 1.
Pfam; PF00109; LSP_1.

Refam; PF00019; LSP_1.

Refam; PF00019; LSP_1.

Refam; PF00019; LSP_1.

Refam; PF00019; LSP_1.

Refam; Reformed; LSP_1.

Reformed; Refam; LSP_1.

Reformed; Refam; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             71 RDPCDPHKGLFCDFGSPANRKIGVCTAK-DGAPCIFGGTVYRSGESFQSSCKYQCTCLDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9 LALVVILLHLTRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCAKQLNEDCSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67 TOPCDHIKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCQHQCTCIDG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            173 ------TVVGPALAAYRLEDTFGPDPTMI-----RANCLVQTTEWSACSKTCGM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44.8%; Score 947; DB 1; Length 349;
llarity 46.6%; Pred. No. 5.6e-66;
Conservative 58; Mismatches 101; Indels 40; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TEP TYPE-1.
HEPARIN BINDING.
CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . . ) (POTENTIAL).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
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CONNECTIVE TISSUE GROWTH FACTOR.
IGFBP.
VWFC.
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/FTId=VSP 002460.
D -> H (IN REF. 4).
0ECF8470B357EA95 CRC64;
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38069 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             366 AFPFY--RLFNDI 376
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349 AA;
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CTGF_BOVIN
ID _CTGF_BOVIN
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Best Local Simi
Matches 174;
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368 PFY--RLFNDI 376
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338 SLYYRKMYGDM 348
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                                                                                                                                                                                              269
284
349 AA;
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CONFLICT
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                                                                                                                                                                                                                          DNA synthesis; Extracellular matrix; Heparin-binding;
                                                                  Bos taurus (Bovine).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoldea;
                                                                                                                                                                       P.P.
                                                                                                                                                           Liliensiek B., Lin Z., Fotsis T., Schimanski M., Bierhaus A., Kanitz M., Kauffmann G., Schweigerer L., Ziegler R., Nawroth Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL, CONNECTIVE TISSUE GROWTH FACTOR
  O18739; Q9GL71;
15-JUL-1998 (Rel. 36, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation update)
Connective Lissue growth factor precursor.
CTGF OR CCN2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL, AF000137; AAB66596.1; --
EMBL, AF309555, AAG30290.1; --
INTERPRO, IPR006208; CQB knot.
INTERPRO; IPR006208; CQB knot.
INTERPRO; IPR000867; INST_gro_fac_pr.
INTERPRO; IPR000084; TSP1.
INTERPRO; IPR001007; VWF_C.
Pfam; PF00007; CYB_Knot; I.
Pfam; PF00007; CYB_Knot; I.
Pfam; PF00009; tSp_1; 1.
Pfam; PF00099; tSp_1; 1.
SMART; SM00121; IS; 1.
SMART; SM001219; ISP1; 1.
SMART; SM00219; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DR PROSITE; PS01185; CTCK 1; 1.

DR PROSITE; PS01225; CTCK 2; 1.

DR PROSITE; PS01225; GTCK 2; 1.

DR PROSITE; PS01209; TSP1; 1.

DR PROSITE; PS01208; WWFC 1; 1.

W Cell adhesion; DNA synthesis; Extractive Signal.

Signal.

CHAIN
                                                                                                    Bovidae, Bovinae, Bos.
NCBI_TaxID=9913;
                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                        SEQUENCE FROM N.A.
TISSUE=Liver;
                                                                                                                                                 TISSUE=Aorta;
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8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128 VGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248 STRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLSVK 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     278 TYRAKECGVCTDGRCCTPHRTTTLPVEFKCPDGEVMKKSMMFIKTCACHYNCPGDNDIFE 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12 AFVLLLALCSRPASSQDCSAPCQCPAGPACPAGVSLVLDGCGCCRVCAKQLSELCTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10 ALVVTLIHLTRLALS-TCPAACHCPL-EAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 308 KYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEAAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188 SEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCSKTCGTGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-JL., 1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Connective tissue growth factor precursor.
Connective (Pig).
Sus scrofa (Pig).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi;
Mammalia, Eutheria, Cetartiodactyla, Suina; Suidae, Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
TISSUE-Uterus;
TISSUE-192390475; PubMed=9242708;
Brigstock D.R., Steffen C.L., Kim G.Y., Vegunta R.K., Diehl J.R., Harding P.A.;
VWFC.

HEPARIN-BINDING (BY SIMILARITY).

CTCK.

CTCK.

BY SIMILARITY.

CO -> DC (IN REF. 1).

CV -> YI (IN REF. 1).

CO -> YI (IN REF. 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
44.1%; Score 933; DB 1; Length 34:
Best Local Similarity 46.4%; Pred. No. 6.7e-65;
Matches 172; Conservative 59; Mismatches 102; Indels
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                                                                                                                                                                                                                                                                                                        72 DPCDPHKGLFCDFGSPANRKIGVCTAK-DGAPCVFGGTVYRSGESFQSSCKYQCTCLDGA 130
                                                                                                                                                                                                                                 217 ISTRVINDNAFCRLEKQSRLCMVRPCEADLEENIKKGKKCIRTPKISKPVKFELSGCTSV 276
                                                                                                                                                                                                                                                                                  307 KKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEAA 366
                                                           VGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDA 187
                                                                                                                                                                   -----KDHTVVGPALAAYRLBDTFGPDPTMM-----RANCLVQTTBWSACSKTCGMG 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TECHNOLOGY 17:10-21(1992).

PUNCTION: IMMEDIATE-EARLY PROTEIN LIKELY TO PLAY A ROLE IN CELL PROTEIN LIKELY TO PLAY A ROLE IN CELL CROWTH REGULATION. ITS OVERSPRESSION IS ASSOCIATED WITH THE OVERSION SEASOCIATED WITH THE OVERSION OF NOV GENE IN CHICKEN EMBRYONIC FIBROBLASTS (CEF) IS SUFFICIENT OF INDUCE THE TRANSPORMATION OF CEF IN VITRO.

SUBCELLULAR LOCATION: Secreted.

TISSUE SPECIFICITY: BRAIN AND HEART, AND AT A LOWER LEVEL IN MUSCLE AND INTESTINE, IN THE EMBRYO. LUNG AND LESS SO IN BRAIN AND BENEWL, CHICKEN.

DENERN, IN ADULT CHICKEN.

DENERN, IN ADULT CHICKEN.

DENERN, IN ADULT CHICKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: Belongs to the CCN family.
-!- SIMILARITY: Contains 1 IGFBP domain.
-!- SIMILARITY: Contains 1 VWFC domain.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                                                                         247 ISTRVINDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLSV
                                                                                                                                 188 SEVELTRINNELLAVGKGRSLKRL-PVFGMEPRILYNPLQGQKCIVQTTSWSQCSKTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Proviral rearrangements and overexpression of a new cellular gene (nov) in myeloblastosis-associated virus type 1-induced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
NOV protein precursor (Nephroblastoma overexpressed gene protein)
NOV OR CCN3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Joliot V., Martinerie C., Dambrine G., Plassiart G., Brisac M., Crochet J., Perbal B.;
                                                                                             131 VGCVPLCSMDVRLPSPDCPFPRRVKLPGKCCEEWVCDEP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=Brown leghorn;
MEDLINE=92107157; PubMed=1309586;
                                                                                                                                                                                                                                                                                                                                                          367 FPFY--RLFNDI 376
                                                                                                                                                                                                                                                                                                                                                                                337 ESLYYRKMYGDM 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gallus gallus (Chicken).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nephroblastomas.";
Mol. Cell. Biol. 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHICK
                                                           128
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           Translation and consecretization of nover neparation constitution and consecretization of nover neparation of acceptance in uterine secretory fluids. Identification as heparintered by 10,000 forms of connective tissue growth factor.";

J. Biol. Chem. 272.20275-2028(1997).

G. 1- FUNCTION: Major connective tissue mitoattractant secreted by vascular endothelial cells. Promotes proliferation and differentiation of chondrocytes (By similarity). Mediates heparinand divalent cation-dependent cell adhesion in many cell types including fibroblasts, myofibroblasts, endothelial and epithelial cells (By similarity).

G. SUBUNIT: Monomer (By similarity).

G. SUBUNIT: Monomer (By similarity).

G. SUBUNIT: Balongs to the extracellular matrix and as a soluble form (By similarity).

G. SIMILARITY: Contains 1 IGFBP domain.

G. SIMILARITY: Contains 1 IGFBP domain.

G. SIMILARITY: Contains 1 TWFC domain.

G. SIMILARITY: Contains 1 TWFC domain.
                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation. the buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or eend an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68 QPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDGA 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 ALWTLLHLTRLAL-STCPAACHCPL-EAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKT 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12 AFVLLLALCSRPASGQDCSGQCQCAAGKRACPAGVSLVLDGCGCCKLCAKQLGELCTER 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Extracellular matrix; Heparin-binding;
 Purification and characterization of novel heparin-binding growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TSP TYPE-1.
HEPARIN-BINDING (BY SIMILARITY).
CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
CONNECTIVE TISSUE GROWTH FACTOR
IGFBP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.8%; Score 906; DB 1; Length 349 
llarity 44.9%; Pred. No. 8.1e-63; 
Conservative 57; Mismatches 108; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BB510E2B2B52D4A0 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U83916; AAC48756.1; -.
InterPro; IPR006208; Cys_knot.
InterPro; IPR006207; Cys_knot_C.
InterPro; IPR000867; Insl_gro_fac_pr.
InterPro; IPR000084; TSP1.
InterPro; IPR001007; VWF_C.
Pfam; PP00007; Cys_knot; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00041; CT; I.
SMART; SM00012; IB; I.
SMART; SM00121; IB; I.
SMART; SM00209; TSP1; I.
SMART; SM00214; VWC; I.
PROSITE; PS01225; CTCK_1; I.
PROSITE; PS01225; GTCK_2; I.
PROSITE; PS0022; IGF BIDING; I.
PROSITE; PS01208; VWCC_1; I.
PROSITE; PS01208; VWCC_1; I.
CC11 adhesion; DNA synfhesis; Ext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00007; Cys knot;
Pfam; PF00219; IGFBP; 1.
Pfam; PF00090; tsp_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           323
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349 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00090; ts|
Pfam; PF00093; vw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        167;
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Best Local S
Matches 167
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DISULFID
SEQUENCE
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SIGNAL
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                                                                                                                                                                                                                                SEQUENCE FROM N.A.

Weiskirchen R., Bister K.;
Submitted (AUG-1994) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: Immediate-early protein likely to play a role in cell
growth regulation (By similarity).

-!- SUBCELLULARITY: Belongs to the CCM family.

-!- SIMILARITY: Contains 1 IGFBP domain.

-!- SIMILARITY: Contains 1 VWFC domain.

-!- SIMILARITY: Contains 1 TSP type-1 domain.

-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----STCPAAC--HCPLEAPKCAPGVGLVRDGCGCCKVCAK
                                                                                                                 Coturnix coturnix japonica (Japanese quail).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Archosauria, Aves, Neognathae, Galliformes, Phasianidae, Phasianinae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P42642;
10.NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
NOV protein precursor (Nephroblastoma overexpressed gene protein)
NOV OR CCN3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-LINKED (GLCNAC. . .) (POTENTIAL) 717D9F8533882E89 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
40.1%; Score 848; DB 1; Length 353
Best Local Similarity 43.3%; Pred. No. 2.4e-58;
Matches 164; Conservative 45; Mismatches 104; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VWFC.
TSP TYPE-1.
CTCK
BY SIMILARITY.
BY SIMILARITY
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BY SIMILARITY.
BY SIMILARITY.
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IGFBP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL, U13063; AAA21128.1; ...
InterPro; IRR006208; Cys knot.
InterPro; IRR006207; Cys knot.
InterPro; IRR00884; TSP1.
INTERPROSOURCE (TSP1.1)
INTERPROSOURCE (TSP1.1)
INTERPROSOURCE (TSP1.1)
INTERPROSOURCE (TCK.1)
INTERPOSOURCE (TCK.1)
INTERPROSOURCE (TCK.1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38667 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10 ALVVILLHLIRLAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        276 2
353 AA;
                                                                                                                                                                                                NCBI_TaxID=93934;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DISULFID
DISULFID
DISULFID
                                                                                                                                                                                Coturnix
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIGNAL
    ò
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  208 EWSACSKSCGMGFSTRVINRNQQCEMVKQTRLCMMRPCENEBPSD-KKGKKCIQTKKSMK 266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    267 AVRFEYKNCISVQIYKPRYCGLCNDGRCCIPHNIKIIQVEFRCPQGKFLKKPMALINICV 326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCI 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG---- 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTT 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235 SWSQCSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPE 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PVRFTYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCK 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LVVTLLHLTRLALS----TCPAAC--HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDC 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12 ÍLLILLILLIRPCEVSGREAACPRPCGGRCPAEPPRCAPGVPAVLDGCGCCLVCARORGESC 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183 AAYRQEATLGIDVSD----SSANCIEQTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IGREP.
VWFC.
TSP TYPE-1.
CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N'INKED GLCYAC. . ) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40.2%; Score 851.5; DB 1; Length 351; 44.0%; Pred. No. 1.3e-58; ive 44; Mismatches 104; Indels 61.
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NOV PROTEIN.
                                                                     Interpro; IRRO06207; Cy6 Knot. C.
Interpro; IPR006607; Inal gro_fac_pr.
Interpro; IPR000864; TSP1.
Interpro; IPR000864; TSP1.
Interpro; IPR000864; TSP1.
Interpro; IPR000804; TSP1.
Pfam; PF000007; Cy8 Knot; 1.
Pfam; PF000007; Cy8 Knot; 1.
Pfam; PF0000007; Cy8 Knot; 1.
SMART; SM000209; TSP1, 1.
SMART; SM00121; IB; 1.
SMART; SM002204; TSP1, 1.
PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01222; GTF BINDING; 1.
PROSITE; PS01222; GTF BINDING; 1.
PROSITE; PS010222; IGF BINDING; 1.
PROSITE; PS01022; IGF BINDING; 1.
PROSITE; PS01022; IGF BINDING; 1.
PROSITE; PS01084; VWFC_2; 1.
PROSITE; PS01084; VWFC_2; 1.
                                                      Cys_knot.
Cys_knot_C.
Insl_gro_fac_pr.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CNYNCPHANEAAF 367
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOV_COTJA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DISULFID
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Matches
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NOV_COTJA
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66; Gaps

us-09-495-448a-4.rsp

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DOMAIN
DOMAIN
DISULFID
DISULFID
DISULFID
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DOMAIN
DOMAIN
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  MEDINE=22388257; PubMed=12477932;
A Klauener R.D., Collins F.S., Wagner L.H., Derge J.G.,
A Klauener R.D., Collins F.S., Wagner L., Schemmen C.M., Schuler G.D.,
A Altschul S.F., Zeeberg B., Buttow K.H., Schaefer C.F., Bhat N.K.,
A Diatchenny L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
B Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Haieh F.,
A Diatchenny L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
B Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
A Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
B Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
Richards S., Worley V.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
A Vilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A Fahby J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
A Whiting M., Madan A., Touchman J.W., Green E.D., Dickson M.C.,
                                                                                                                                                                                                                                                                                                                                                                                                   348
                                                                                                                                                     127 YQCTCRDGQIGCLPRCNLGLLLPGPDCPFPRKIEVPGECCEKWVC-----EPRDEV-- 178
                                             QLNEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQ 118
                                                                    HOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGL 178
                                                                                                                                                                                                                        LG------KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQK 228
                                                                                                                                                                                                                                                                                                        229 CIVOTISWSQCSKICGIGISTRVINDNPECRLVKBTRICEVRPCGQPVYSSLKKGKKCSK 288
                                                                                                                                                                                                                                                                                                                                       263 TKKSMKAVRFBYKNCTSVQTYKPRYCGLCNDGRCCTPHNTKTIQVBFRCPQGKFLKKPPM 322
67
                                                                                                                                                                                                                                                                LGGFAMAAYRQEATLGIDVSD-----SSAN
                                                                                                                                                                                                                                                                                                                                                                                                TKKSPEPVRFTYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKWRFRCEDGETFSKNVM
SLPVLLLLLLLLLRPSEVNGREAPCPRPCGGRCPAEPPRCAPGVPAVLDGCGCCLVCAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SECUENCE FROM N.A.
TISSUB=Placenta;
MEDLINE=9436229; PubMed=7520150;
Martinerie C. F. Hull W.; Joubert I., Badzioch M., Saunders G.F.,
Strong L.C., Perbal B.;
"Structural analysis of the human nov proto-oncogene and expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOV CHONAN STANDALD; FRI; 357 AA.

NOV HORAN STANDALD; FRI; 357 AA.

01-FEB-1996 (Rel. 33, Created)

10-FEB-1996 (Rel. 33, Last sequence update)

10-CT-2003 (Rel. 42, Last annotation update)

NOV protein homolog precursor (NovH) (Nephroblastoma overexpressed agene protein homolog).

NOV OR CM3 OR NOVH OR IGFBP9.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
Jiang D., Gou D., Li W.;
"Cloning, sequencing and expression of human nov gene.";
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in Wilms tumor.";
Oncogene 9:2729-2732(1994).
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                                                                                                                                                                      MEDIINE=99128329; PubMed=9927660;
Perbal B., Martinerie C., Sainson R., Werner M., He B., Roizman B.;
Perbal B., Martinerie C., Sainson R., Werner M., He B., Roizman B.;
"The C-terminal domain of the regulatory protein NOVH is sufficient promote interaction with fibulin IC: a clue for a role of NOVH in
                                                                                                                                                                                                                                                                                               Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smallus D.E.,
Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.,
"Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences.",
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              stromal type.

-!- SIMILARITY: Belongs to the CCN family.
-!- SIMILARITY: Contains 1 IGFBP domain.
-!- SIMILARITY: Contains 1 VWFC domain.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK)
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UGFBP.
VWFC.
TSP TYPE-1.
CTCK.
BY SIMILARITY.
BY SIMILARITY.
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InterPro; IPR006207; Cys knot C.
InterPro; IPR008647; Insl gro_fac_pr.
InterPro; IPR008647; Insl gro_fac_pr.
InterPro; IPR001007; WWF C.
Pfam; PF00007; Cys_knot; 1.
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EWBL; X78325; CAA55146.1; JOINED.
EWBL; X78353; CAA55146.1; JOINED.
EWBL; X78354; CAA55146.1; JOINED.
EWBL; X96584; CAA65403.1; -.
EWBL; AY082381; AAL92490.1; -.
EWBL; BCO15028; AAH15028.1; -.
PIR; 138069; 138069.
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PS50184; VWFC 2; 1.
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PROSITE; PS50184; VWF
Growth factor; Signal
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us-09-495-448a-4.rsp

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68 QPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDGA 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  175 RPEATLGIDASDTSFA-----CIAQTTEWS 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238 QCSKTCGTGISTRVTNDNPECRLVKETRICEVRPC-GQPVYSSLKKGKKCSKTKKSPEPV 296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128 VGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9 LALVVIILHLIRLALSTCPAAC-HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         260 HFHYKNCISVOPYKPKFCGQCSDGRCCTPHSIKIMHVEFVCPQKRIVKKPVMVISTCVCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ---KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWS
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NOV PROTEIN HOMOLOG.
IGFBP.
VWFC.
TSP TYBE-1.
CTCK.
BY SIMILARITY.
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                                                                                                                                                EMBLY, U3/052; AABLI/U95.1; -..
INTERPRO 1PRO06207; Cys_Knot.
INTERPRO; IPRO06207; Cys_Knot.
INTERPRO; IPRO00867; Inal_gro_fac_pr.
INTERPRO; IPRO00867; Inal_gro_fac_pr.
INTERPRO; IPRO000867; Inal_gro_fac_pr.
INTERPRO; IPRO01007; VWF_C.
Pfam; PRO0107; Cys knot; 1.
Pfam; PRO0109; tsp_1; 1.
SWART; SW00121; IS 1.
SWART; SW00121; IS 1.
SWART; SW00212; ISP1; 1.
SWART; SW00212; ISP1; 1.
PROSITE; PS01185; CTCK 2; 1.
PROSITE; PS01186; VWFC_1; IPROSITE; PS01186; VWFC_2; 1.
CTCWT i at a signal.
SIGNAL 1 at a signal.
DOMAIN 21 355 TFCP 1
CTCK 275 TFCP 1
CTCK 275 TFCP 2
CTCK
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92 IG
235 IG
235 CT
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322 BY
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                                                                                                                                     EMBL; U37063; AAB17096.1;
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285
265
343 AA;
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DISULFID
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WEDLINE-96257227; PubMed=8666280;

WINDLINE-96257227; PubMed=8666280;

WINDLINE-96257227; PubMed=8666280;

WINDLINE-96257227; PubMed=8666280;

WINDLINE-100 and Characterization of xnov, a Xenopus laevis ortholog of the Chicken nov gene.";

Gene 177:243-248(1996).

COURTION: Immediate-early protein likely to play a role in cell growth regulation (By similarity).

COURTION: Immediate-early protein likely to play a role in cell growth regulation (By similarity).

COURTION: Immediate con femily.

COURTION: Information 1 IGFBP domain.

COURTION: AMILARITY: Contains 1 VWFC domain.

COURTION: AMILARITY: Contains 1 Ceterminal cystine knot-like (CTCK) domain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGTGISTRVTNDNPECRLVKETRICEVRPCGQ-PVYSSLKKGKKCSKTKKSPEPVRFTYA 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPH 361
                                                                                                                                                                                                                                                                                        7 RALALVVTLIHLTRLALST -- CPAAC -- HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNE 62
                                                                                                                                                                                                                                                                                                                                           14 QCLCLTFLLLHLLGOVAATORCPPOCPGRCPATPPTCAPGVRAVLDGCSCCLVCARORGE 73
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Barmphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                  N-LINKED GLCNAC. . .) (POTENTIAL)
N-LINKED GLCNAC. . .) (POTENTIAL)
N -> K (IN REF. 3).
035D5BF4576BD85B CRC64;
                                                                                                                                                                                                                                         39;
                                                                                                                                                                                  Query Match 39.1%; Score 827.5; DB 1; Length 357; Best Local Similarity 43.1%; Pred. No. 9.3e-57; Matches 157; Conservative 48; Mismatches 120; Indels 39;
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01-0CT-1996 (Rel. 34, Last sequence update)
10-0CT-2003 (Rel. 42, Last annotation update)
NOV protein homolog precursor (Xnov).
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  BY SIMILARITY.
BY SIMILARITY.
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295 333
300 337
97 97
280 280
97 97
357 AA; 39162 M
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P51609;
DISULFID
DISULFID
CARBOHYD
                                                                           CARBOHYD
CONFLICT
SEQUENCE
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Gaps

63;

63 63 180

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REQUENCE FROW N.A.

SEQUENCE FROW N.A.

SEQUENCE TROWN N.A.

STRAIN=C57BL/60; TISSUB=Embryonic head, and Spinal cord;

MEDININE=25354683; PubMed=12466851.

RA DELINE=25354683; PubMed=12466851.

RA NIKAIGO I., OSATO N., SAITO R., SUZUKI H., YAMANAKA I., KYOSAWA H., RAGARINA T., HAILI D.P., BULK C., Hume D.A., CHORCHODGH C., GoloDori T., Baldarelli R., Hill D.P., Bulk C., Hume D.A., CHORCHOUGH J., GoloDori T., Baldarelli R., Anapin A., Matsuda H., Batalov S., Beisel K.W., RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S., RA Dalla E., Dragani T.A., Fletcher C.F., Forrest A., Frazer K.S., Rawasawa Y., Kadesierski R.M., King B.L., Kanaj H., Kawaji H., Kawaji H., Kawasawa N., Jackson I.J., Jarris B.D., RA Grimmond S., Gustincier C., Godzik A., Gough J., RA Kanaj A., Kawaji H., Marchioni L., Morchaite L., Mith H., Konagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A., Mogashima T., Nunmata K., Okido T., Pavan W.J., Pertea G., Pesole G., Fornagaya A., Kurochkin I.V., Lee Y., Lenhard B., Lyons P.A., Magashima T., Nunmata K., Okido T., Pavan W.J., Pertea G., Pesole G., Petroveky N., Pillai R., Pontius J.U., Qi D., Ramachandran S., Ravarde R., Manelete C., Sengile C.A., Watnabe C., Wannelet C., Sengile C.A., Watnaba E.D., Wahlestedt C., Wangel C., Wange L., Wannel C., Wangel C.A., Wanger L., Wahlestedt C., Wange Y., Watnaba R., Yang I., Wallara M., Sakazume N., Sakazu I., Rayatsu N., Rayawa I., Matawa I., Rayawa I., Natawa I., Analyasis of the mouse transcriptome based on functional annotation of K. Nature 420:563-573 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Czech II; TISSUE=Breast tumor; MEDLINE=22388257; PubMed=12477932; Strauberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Strauberg R.L., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.
                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
SEQUENCE PROM N.A.
STRAIN=1929(Sv, and CCR; TISSUE=Brain;
MEDLINE=97131223; PubMed=8975721;
Snaith M.R., Natarajan D., Taylor L.B., Choi C.P., Martinerie C.,
Snaith M.R., Schoffeld P.N., Boulter C.A.;
"Genomic structure and chromosomal mapping of the mouse nov gene.";
Genomics 38:425-428(1996).
RESULT 14

NOV MOUSE

C 064299; Q8CA67;

DT 01-NOV-1997 (Rel. 35, Created)

DT 01-NOV-1997 (Rel. 35, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DR NOV protein homolog precursor (NovH) (Nephroblastoma overexpressed on Nov Or CCN3.
                                                                                                                                              Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                           STRAIN=C57BL/6;
MEDLINE=96204003; PubMed=8622864;
Martinerie C., Chevalier G., Rauscher F.J. III, Perbal B.;
"Regulation of nov by WII: a potential role for nov in
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oncogene 12:1479-1492(1996).
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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Remometal M. J. Uselin P. P. Tochkylds S., CENTHOLE P. M. Millady S. J.,
Raha S. S., Loquallato N.A., Peters G.J., Abramoon R. D., Millady S. J.,
Raha S. S., Loquallato N.A., Peters G.J., Abramoon R. D., Millady S. J.,
Richard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Bulk S. W.,
Richard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Bulk S. W.,
Richard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Bulk S. W.,
Richard S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Bulk S. W.,
Richard S. W. Touchman J.W., Scheepen B. D., Dickero M.C.,
Radiagaz A.C., Garmed J. S., Garmet S. J. W.,
Rediagaz A.C., Grant S. J. W., Scheepen B. D., Dickero M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.D., Dickero M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.D., Myeer R.M.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., W., Scheepen M.C.,
Scheepen B. J. W., Grant S. J. W., Scheepen M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., W., Scheepen M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., W., Scheepen M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., W., Scheepen M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., W., Scheepen M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., Scheepen M.C.,
Rediagaz A.C., Grant S. J. W., Scheepen B.J., Scheepen M.C.,
Rediagaz A.C., Grant S. W., Scheepen B.J., Scheepen M.C.,
Rediagaz A.C., Grant S. W., Scheepen B.J., Scheepen M.C.,
Rediagaz A.C., Grant S. W., Scheepen B.J., Scheepen B.
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DISULFID
DISULFID
CARBOHYD
CARBOHYD
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                   DCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCT 122
                                                                                                                                                                                                                                                     SCSEMRPCDQSSGLYCDRSADPNNQTGICMV-PEGDNCVFDGVIYRNGEKFEPNCQYFCT 126
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKE 182
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-:- TISSUE SPECIFICITY: Ubiquitous.
-:- SIMILARITY: Belongs to the CCN family.
-:- SIMILARITY: Contains 1 IGFBP domain.
-:- SIMILARITY: Contains 1 TSP type-1 domain.
-:- SIMILARITY: Contains 1 TSP type-1 domain.
-:- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                   7 RALALVVTLLH-LTRLALS-TCPAAC--HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNE
                                                                                                                                                                   STRAIN=Sprague-Dawley,
MEDLINE=ROSSISTS; PubMed=10570975;
MEDLINE=ROSSISTS; PubMed=10570975;
Liu X.J., Crowe P.D., Kelner G.S., Fan J., Barry G., Manu F.,
Ling N., De Souza B.B., Maki R.A.;
"Nephroblastoma overexpressed gene (NOV) codes for a growth factor
that induces protein tyrosine phosphorylation.";
Gene 238:471-478(1999).
-!- FUNCTION: Can act as a growth factor for some cells and binds to
specific receptor that leads to the phosphorylation of a 221 kDa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene protein homolog).

NOV OR CCM3.

Rattus norvegicus (Rat).

Bukaryota; Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.

NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
NOV protein homolog precursor (NovH) (Nephroblastoma overexpressed
                                                                                           36;
                                               Length 354;
                                          Query Match
38.8%; Score 822; DB 1; Length 35
Best Local Similarity 44.5%; Pred. No. 2.4e-56;
Matches 162; Conservative 46; Mismatches 120; Indels
  OSECESCFC67829DE CRC64;
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  38928 MW;
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  354 AA;
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SEQUENCE
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use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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TARET.

CTCK.
BY SIMILARITY.
W. LINKED (GLORAC. . .) (POTENTIAL).
W, 02619707DE7CIBFB CRC64;
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NOV PROTEIN HOMOLOG.
IGFBP.
                                                                                                   EMBL, AF171936; AAD49371.1; ...
InterPro; IPR006208; Cyg knot.
InterPro; IPR006207; Cyg knot.
InterPro; IPR000864; Insl_gro_fac_pr.
InterPro; IPR000884; TSP1.
InterPro; IPR000804; TSP1.
InterPro; IPR001007; VWF_C.
Pfam; PF00207; Cyg knot; 1.
Pfam; PF00209; IGFBP; 1.
Pfam; PF00209; LSP1; 1.
Pfam; PF00209; LSP1; 1.
SWART; SM00121; IB; 1.
SWART; SM00121; IB; 1.
SWART; SM00209; TSP1; 1.
SWART; SM00209; TSP1; 1.
PROSITE; PS01185; CTCK_2; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS01229; TSP1; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS01208; VWFC_1; 1.
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SIGNAL 1
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Best Local Simi
Matches 158;
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Search completed: April 22, 2004, 17:57:05 Job time : 11:5276 secs

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Q9wtm9 rattus norv
Q98tx5 xenopus lae
Q9uid7 homo sapien
O42607 xenopus lae
Q9tge gallus gall
Q9pt80 notophthalm
O9765 sus scrofa
O9558 homo sapien
Q9ps6 gallus gall
Q9ps6 gallus gall
Q9ps6 gallus gall
Q9ps6 gallus gall
Q9ps6 rattus norv
Q9dd16 rattus norv
Q9dd16 homo sapien
Q91029 mus musculu
Q920w6 mus spicile
Q920w6 mus spicile
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1 MSSRIARALALVVTLLHLTR......ANBAAFPFYRLFNDIHKFRD 381
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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Listing first 45 summaries
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| 17 | 294 | 13.9 | 470 | ល | Q9VVK3 | dros |
|----|-------|------|------|----|--------|--------------------|
| 18 | 293 | 13.8 | 230 | 4, | Q8WYK7 | |
| 19 | 195 | • | 77 | 4 | Q9UDE4 | |
| 20 | 187 | ٠ | 2327 | 13 | Q9IBG7 | Q9ibg7 xenopus lae |
| 21 | 176 | | 70 | 13 | Q9DF21 | 7 |
| 22 | 174 | 8.2 | 1045 | ហ | Q8T3A6 | o o |
| 23 | 174 | 8.2 | 1070 | വ | Q8T3A7 | _ |
| 24 | 174 | 8.2 | 1111 | S | 9DMX60 | |
| 25 | 170.5 | 8.1 | 1036 | 4 | TAZN60 | н |
| 26 | 170 | ٠ | 4007 | 4, | Q86XX4 | |
| 27 | 169 | 8.0 | 1664 | ហ | Q9TVQ2 | O9tvq2 caenorhabdi |
| 28 | 169 | | 1704 | w | 094446 | Q94446 chironomus |
| 29 | 168.5 | • | 1028 | 17 | Q9JLL0 | Q9jll0 mus musculu |
| 30 | 166.5 | 7.9 | 1048 | 13 | QBAWWS | QBaww5 gallus gall |
| 31 | 164 | 7.8 | 28 | φ | 097574 | 097574 bos taurus |
| 32 | 162.5 | 7.7 | 4998 | Ξ | Q8CG65 | Q8cg65 mus musculu |
| 33 | 161.5 | 7.6 | 2104 | 'n | Q964N4 | Q964n4 caenorhabdi |
| 34 | 161.5 | 7.6 | 2104 | ហ | 021281 | Q21281 caenorhabdi |
| 35 | 161 | ۲. | 360 | យ | Q86AK7 | Q86ak7 dictyosteli |
| 36 | 160.5 | ۲. | 4010 | Ξ | Q80T14 | Q80t14 mus musculu |
| 37 | 159.5 | - | 406 | 1 | 092513 | |
| 38 | 159.5 | 7.5 | 426 | 11 | Q8VEA6 | Q8vea6 mus musculu |
| 39 | 159 | ۲. | 5146 | φ | Q8SPM4 | bos tau: |
| 40 | 158.5 | 7. | 792 | 13 | 090243 | 3 gallus |
| 41 | 158.5 | 7. | 1095 | 13 | Q90XG4 | Q90xg4 gallus gall |
| 42 | 157.5 | ۲. | 2813 | 11 | Q8C1Z8 | mns mn |
| 43 | 156 | 7.4 | 482 | Ξ | O9CVG8 | mus |
| 44 | 156 | 7.4 | 483 | 1 | Q8K0Q1 | mus |
| 45 | 156 | 7.4 | 922 | 11 | Q80Z17 | Q80z17 mus musculu |
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ALIGNMENTS

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RESULT 1

OgwTM9

OgwT
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245 RVTNDNSNCRLVRETRICEVRPCGQPSYTSLKKGKKCTKTKKSQAPVRYTYAGCSSVKKY 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      305 RPKYCGSCVDGRCCTPQQTRTVKIRFRCEDGETFTXNVMMIQSCRCNYNCPHTNB-AYPY 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      188 GELTRKNEFVAVIKG-GLKMLPVFGSDPQ--SHVVBNSKCIVQTTSWSQCSKTCGTGIST 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEAAFPF 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDASE 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           190 VELTRINNELIAVGKGRSLKRLPVFCMEPRILYNPLQGQKCIVQTTSWSQCSKTCGTGIST 249
                                                                                                                                                                                                                                                                                                                                                                                                       LAIALLSGFIDLAVSSCPAVCQCPVEVPKCAPGVGLVLDGCGCCKICAKQLNEDCSKTHP
                                                                                                                                                                                                                                                                                                                                                                       11 LVVTLLH-LTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250 RVINDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLSVKKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia, Eutheria, Primates; Catarrhini, Hominidae, Homo.
MOSI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Kidney;
A Anding B., Long Y.;
A Anding D., Long Y.;
I "Cloning of a new gene down-regulated in the small-cell tumor embryonal-rhabdomyosarcoma (RMS).";
Exbudited (WAY-1997) to the EMBL/GenBank/DDBJ databases.
I Submitted (WAY-1997) to the EMBL/GenBank/DDBJ databases.
R GO; GO:0005576; C:extracellular; IEA.
R GO; GO:0005576; C:extracellular; IEA.
R GO; GO:0005589; F:insulin-like growth factor binding; IEA.
R GO; GO:0001558; P:regulation of cell growth; IEA.
R InterPro; IPR006209; Cys knot.
R InterPro; IPR006809; Cys knot.
R InterPro; IPR000867; Insl_gro_fac_pr.
R InterPro; IPR000867; Insl_gro_fac_pr.
R InterPro; IPR00087; VWP_C.
                                                                                                                                                                                                                                                                          DB 13; Length 375;
                                                                                                                                                                                                                                                                                                                          41; Indels
SMART; SM00121; IB; 1.
SMART; SM00212; ISP; 1.
PROSITE; P801214; VOR; 1.
PROSITE; P801225; CTCK_1; 1.
PROSITE; P801225; CTCK_2; 1.
PROSITE; P801225; TGF EINDING; 1.
PROSITE; P8501209; TSPI; 1.
PROSITE; P8501209; VWFC_2; 1.
ERGUBUCE 375 AA; 41460 MW; 78075CA7B380304E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                    Query Match
78.6%; Score 1663.5; DB 13
Best Local Similarity 79.3%; Pred. No. 4.3e-152;
Matches 295; Conservative 29; Mismatches 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QUID7;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last seq
01-OCT-2003 (TrEMBLrel. 25, Last ann
CYR61 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 1-107 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                370 YRLFNDIHKFRD 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YRLFNDIHKFRD 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
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Q9UID7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 NEDCSKTÓPCDHTKGLECNFGANSTALKGICRAGSEGRPCEYNSRIYGNGESFOPNCKHÓ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCIDGAVGCIPLCPOBLSLPNLGCPNPRLVKVTGQCCEEWVCDBDSIKDPMBDQDGLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF 298
                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CSKSCGTGISTRVINDNPECRLVKETRICEVRPCQQPVYSSLKKGKKCSKTKKSPBPVRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    --LGFDASEVELTRNNELIATGKGSSLKRLPVFGTEPRVLYNPLHAHGQKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN
                                                                                                                                                                                                                                                                                                  1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                  1 STIRTLAVAVILLHLTRLALSTCPASCHCPLEAPKCAPGVGLVRDGCGCCCVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                       61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181 KELGFDASEVELTRNNELIAVGKGRSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYN
                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q98TX5 PRELIMINARY, PRT; 375 AA.
Q98TX5,
Q98TX5,
01-UNA-2001 (TrEMBLrel. 17, Created)
01-OTT-2003 (TrEMBLrel. 17, Last sequence update)
01-OTT-2003 (TrEMBLrel. 25, Last annotation update)
Secreted cysteine-rich protein cyrel.
Xenopus laevis (African clawed frog).
Rukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                    ;
9
                                                                                                                                                                                                    Length 379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A SEQUENCE FROM N.A.

A Latinkic B.V., Benett B., Smith J.C.;

"Characterization of Xenopus cyr61.";

"Characterization of Xenopus cyr61.";

Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.

EMBL; AF320552; AAK00947.1;

EMBL; AF3205576; Ciextracellular; IEA.

GO; GO:00055576; Ciextracellular; IEA.

R GO; GO:0005520; P::nsulin-like growth factor binding; IEA.

R GO; GO:0005520; P::nsulin-like growth; IEA.

R InterPro; IPR006208; Cys_knot.

R InterPro; IPR000637; Cys_knot.

R InterPro; IPR000867; Insl_gro_fac_pr.

R InterPro; IPR000097; VWP_C.

R Pfam; PF00007; Cys_knot; 1.

R Pfam; PF00009; tsp_l; 1.

R Pfam; PF00009; tsp_l; 1.

R Pfam; PF00099; tsp_l; 1.

R Pfam; PF00099; tsp_l; 1.
                                                                                                                                                                                                                                                    Indels
                                                                                                                             379 CYR61.
41728 MW; D2ABAFD77B84762B CRC64;
                                                                                                                                                                                                  Query Match 91.1%; Score 1928; DB 11;
Best Local Similarity 90.6%; Pred. No. 1.3e-177;
Matches 347; Conservative 11; Mismatches 19;
                                                                                                     POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CPHANEAAFPFYRLFNDIHKFRD 381
  PS50092; TSP1; 1.
PS01208; VWFC_1; 1.
PS50184; VWFC_2; 1.
                                                                                                  379
                                                                                                  1
25
379 AA;
                                                                          Signal.
SIGNAL
CHAIN
SEQUENCE
  PROSITE; F
PROSITE; F
PROSITE; F
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309

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24 CNGECQCPNKVPVCDPGVBWVQDGCGCCKVCSKQLGELCTERDVCDPHKGLFCDFGSRVN 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             227 QSRLCMVRPCEADLEENIKKGKKCIRTPKISKPVKFEFSGCTSVKTYRAKFCGVCTDGRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   146 PNPRLVKWGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAVGKGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               206 SLKRLPVFGMEPRILYNP---LQGQKCIVQTTSWSQCSKTCGTGISTRVINDNPECRLVK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           173 ----LPAFRMEB--TYGPDPSLIRANCLVQTTEWSACSKTCGMGISTRVTNDNEHCRLEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26 CPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFGASST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  86 ALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDGAVGCIPLCPQELSLPNLGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         143 PFPRRVKLPGKCCEEWVCDQP------OGRTLVGPA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                263 ETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLSVKKYRPKYCGSCVDGRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  323 CIPOLIRIVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANE--AAFPFYRLFNDI 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-0TN-2001 (TrEMBLrel. 17, Created)
01-0TN-2001 (TrEMBLrel. 17, Last sequence update)
01-0TN-2001 (TrEMBLrel. 25, Last annotation update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
connective tissue growth factor precursor (Connective tissue growth factor precursor (Connective tissue growth factor precursor (Connective tissue growth factor)
Gallus gallus (Chicken).
Eukaryota: Merazca; Chordata; Craniata; Vertebrata; Euteleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match

44.3%; Score 938; DB 13; Length 343;
Best Local Similarity 47.2%; Pred. No. 4e-82;
Matches 168; Conservative 51; Mismatches 95; Indels 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO: 0005576; C: extracellular; IEA.
GO; GO: 0005520; F: extracellular; IEA.
GO; GO: 0005520; F: insulin-like growth factor binding; IEA.
GO; GO: 0001558; P: regulation of cell growth; IEA.
InterPro; IPR06200; Cys knot.
InterPro; IPR0086207; Cys knot.
InterPro; IPR00867; Insl gro_fac_pr.
InterPro; IPR00864; TSPI.
InterPro; IPR000867; WF C.
Pfam; PF00007; Cys_knot; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SECUENCE FROM N.A.
Mukudai Y., Kubora S., Takigawa M.;
Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases
EMBL; AJ298335; CAC33438.1; -
        SMART; SM00041; CT; 1.
SMART; SM00120; TB; 1.
SMART; SM00214; WG; 1.
SMART; SM00214; WG; 1.
PROSITE; PS01185; CTCK 1; 1.
PROSITE; PS00225; CTCK 2; 1.
PROSITE; PS01285; WWC 2; 1.
PROSITE; PS01289; WWFC 2; 1.
SRQUENCE 343 AA; 37366 MW; 93F221C5DB565A81 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gygi D.;
Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  098TQ8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62 NGESFOPNCKHOCTCIDGAVGCIPLCFOELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSI 121
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
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01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Connective tissue growth factor XCTGF.
Xenopus laevis (African clawed frog)
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22;
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Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
B SHEL; U43524; AAB67639.1;
R EMBL; U43524; AAB67639.1;
R GO; GO: 0005520; F: ATACCOLLUAY; IEA.
GO; GO: 0005520; F: insulin-like growth factor binding; IEA.
GO; GO: 0005520; F: regulation of cell growth; IEA.
R GO; GO: 0005520; F: regulation of cell growth; IEA.
R GO; GO: 0005520; F: regulation of cell growth; IEA.
R InterPro; IPR006209; Cys knot C.
R InterPro; IPR000867; Insl_gro_fac_pr.
R InterPro; IPR000097; WWF_C.
R InterPro; IPR000007; WWF_C.
R Ffam; PF00007; Cys knot; 1.
R Ffam; PF00009; IGPBB; 1.
R Ffam; PF00009; IGPBB; 1.
R Ffam; PF00009; IGPBB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 334;
Pfam; PF00007; Cys knot; 1.

Pfam; PF00219; IGFBP; 1.

Pfam; PF00091; tyo; 1.

Pfam; PF00093; vwc; 1.

SMART; SM00201; CT; 1.

SMART; SM00201; CT; 1.

SMART; SM00214; Vwc; 1.

PROSITE; PS01225; CTCK_2; 1.

PROSITE; PS01208; VWFC_1; 1.

PROSITE; PS01208; VWFC_2; 1.

PROSITE; PS01208; VWFC_2; 1.

PROSITE; PS01208; VWFC_2; 1.

SEQUENCE 334 AA; 37246 MW; 9188987A7352E948 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75.0%; Score 1587; DB 4; Length 33
85.8%; Pred. No. 9.2e-145;
ive 5; Mismatches 22; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               342 TFSKN----VMMIQSCKCNYNCPHANEAAFPFYRLFNDIHKFRD 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         296 IFQERHDDPVL-----KCNYNCPHANEAAFPFYRLFNDIHKFRD 334
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Matches 295, Conservative
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129 GCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDAS 188
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          189 EVELTRINNELIAVGKGRSLKRLPVFGMEPRILYNPLOGOKCIVQTTSWSQCSKTCGTGIS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69 PCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 13; Length 347;
        A Cash D.B., Gates P.B., Imckawa Y., Brockes J.P.,

T "Identification of newt connective tissue growth factor as a tretinoid regulation in lumb blastenal cells.";

I denta 222.116-124[1498].

E MALL, AJ271167; CAB65965.11.

R GO; GO:0005250; Finsulin-like growth factor binding; IEA.

R GO; GO:0005250; Finsulin-like growth factor binding; IEA.

R GO; GO:0005250; Finsulin-like growth; IEA.

R InterPro; IPR000507; Cys knot.

R InterPro; IPR000507; Cys knot.

R InterPro; IPR001007; Cys knot.

R InterPro; IPR001007; VWF Not.

R Pfam; PF00070; Cys knot.

R SWART; SW00121; IB; 1.

R PROSITE; PS01225; CTCK.2; 1.

R PROSITE; PS01202; TSP; 1.

R PROSITE; PS01203; VWFC.2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
43.1%; Score 912.5; DB 13; Length
Best Local Similarity 45.1%; Pred. No. 1.2e-79;
Matches 167; Conservative 54; Mismatches 112; Indels
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MEDLINE=99033008; PubMed=9813273;
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MYYRKMYGDM 346
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Sus scrofa (Pig)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211 GISTRVINDNAFCRLEKQSRLCMVRPCBADLEENIKKGKKCIRTPKISKPIKFELSGCTS 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEA 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271 VKTYRAKFCGVCTDGRCCTPHRTATLPVEFKCPDGEIMKRKMMFIKTCACHYNCPGDNDI 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          127 AVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFD 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLS 305
                                                                                                                                                                                                                                                                                                                                                                                                                        99
                                                                                                                                                                                                                                                                                                                                                                                                                                                           65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 ALALVVTLIHLTRLALSTCPAACHCPL-BAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 AVALLIALIG-PEVRGQECSGQCQCGSGPGPSCPAGVSLVLDGCGCCRVCAKQLGELCTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67 TQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDG
                                                                                                                                                                                                                                                                                                                                                                                  Gарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Notophthalmus viridescens (Eastern newt) (Triturus viridescens). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae; Notophthalmus.
                                                                                                                                                                                                                                                                                                                                                                                40;
                                                                                                                                                                                                                                                                                    CONNECTIVE TISSUE GROWTH FACTOR 69E639AF69BF1D00 CRC64;
                                                                                                                                                                                                                                                                                                                                               DB 13; Length 344;
                                                                                                                                                                                                                                                                                                                                           Query Match 44.0%; Score 930; DB 13; Length 3
Best Local Similarity 45.3%; Pred. No. 2.4e-81;
Matches 169; Conservative 59; Mismatches 105; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          347 AA
                                                                                                                                                                                                                                                                 POTENTIAL
                                    Pfam; PF00093; vwc; 1.
SWART; SM0041; CT; 1.
SWART; SM00121; IB; 1.
SWART; SM00209; TSP1; 1.
SWART; SM00214; vwc; 1.
SROSITE; PS01185; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS01022; IGF BINDING; 1.
PROSITE; PS01029; TSP1; 1.
PROSITE; PS01084; VWFC 1; 1.
PROSITE; PS01084; VWFC 1; 1.
                                                                                                                                                                                                                                                                                                        37499 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      366 AFPFY--RLFNDI 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               331 FESLYYRKMYGDM 343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
TISSUE=Forelimb blastema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE=Forelimb blastema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                 21
344
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Submitted (JAN-2000)
                                                                                                                                                                                                                                                                                                      344 AA;
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RESULT 6
109PT80
10PT 01-M
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Gaps

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NCBI_TaxID=9606;
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09PSS6;
       COOCCO CO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ------KDHTVVGPALAAYRLEDTFGPDPTMM-----RANCLVQTTEWSACSKTCGMG 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  217 ISTRVTNDNASCRLEKQSRLCMVRPCEADLEENIKKGKKCIRTPKISKPVKFELSGCTSV 276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68 OPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDGA 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VGCIPLCPQELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDA 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISTRVINDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLSV 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEAA 366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 ALVVTLLHLTRLAL-STCPAACHCPL-EAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              131 VGCVPLCSMDVRLPSPDCPFPRRVKLPGKCCEWVCDEP----------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEVELTRNNELIAVGKGRSLKRL-PVFGMEPRILYNPLØGQKCIVQTTSWSQCSKTCGTG
                                                                                                                                       Harding P.A., Brigstock D.R., ("Cloning and sequencing of a porcine connective tissue growth factor (CTGF) cDNA.",
  Chordata, Craniata, Vertebrata, Euteleostomi,
Cetartiodactyla, Suina, Suidae, Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40;
                                                                                                                                                                                                                          EMBL; U70060; ABD0174.1; -.

R GO; GO:0005576; C:extracellular; IEA.

GO; GO:0005520; F:insularinaliar-like growth factor binding; IEA.

GO; GO:0001580; P:regulation of cell growth; IEA.

R InterPro; IPR006203; Cys knot.

R InterPro; IPR006807; IIAB1_gro_fac_pr.

R InterPro; IPR000867; IIAB1_gro_fac_pr.

R Pfam; PF0000967; IIAB1_gro_fac_pr.

R Pfam; PF000091; UFP_D: 1.

R Pfam; PF000091; UFP_D: 1.

R R SWART; SW00011; IEB; 1.

R SWART; SW00203; IZEB; 1.

R SWART; SW00203; IZEB; 1.

R SWART; SW00203; IZEB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
41.5%; Score 878; DB 6; Length 34;
Best Local Similarity 43.3%; Pred. No. 2.5e-76;
Matches 161; Conservative 60; Mismatches 111; Indels
                                                                                                                                                                                                             Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35AB4275AC1D4B3A CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS01208; VWFC_2; 1.
SEQUENCE 349 AA; 37946 MW; 35AB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ::: |:
ESLYYRKMYGDM 348
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Eukaryota; Metazoa;
Mammalia; Butheria;
NCBI_TaxID=9823;
                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128
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095958
ID 09595
AC 09595
DT 01-M
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 ALK-GICRAQSEGRPCEYNSRIYONGESFQPNCQHQCTCIDGAVGCIPLCPQELSLPNLG 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134 ----IPKLAGSHC----EPLLQQLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     222 RLCYIOPCDSNILKTIKIPKGKTCQPTFQLSKAEKFVFSGCSSTQSYKPTFCGICLDKRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26 CPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFGASST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145 CPNPRLVXVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAVGKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               205 RSLKRLPVFGMEPRILYNPLQGQKCIVQTTSWSQCSKTCGTGISTRVTNDNPECRLVKET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167 TSYKTMPAYRNIPLI -----WKKKCIVQATKWTPCSRTCGMGISNRVTNENSNCEMRKEK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     265 RICEVRPCGQPVYSSLK--KGKKCSKTKKSPEPVRFTYAGCLSVKKYRPKYCGSCVDGRC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 CHWPCKCPQQKPRCPPGVSLVRDGCGCCKICAKQPGEICNEADLCDPHKGLYCDYSVDRP
                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

IISSUE=Mammary gland;
van Golen K.L., Davies S., Wu Z.F., Wang Y.F., Bucana C.D., Root H.,
Chandrasekharappa S., Strawderman M., Ethier S.P., Merajver S.D.;
"A novel putative IGF-binding, tumor suppressor protein, IIBC, and
Rhoc GTPase, are determinants of the inflammatory breast cancer
                                                                                                                                        nomo appress (maman).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia; Butheria; Primates; Catarrhini, Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Districted (APR-1999) to the EMBL/GenBank/DDBJ databases.

Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.

R GO; GO:00576; C:extracellular; IEA.

GO; GO:0005576; C:extracellular; IEA.

GO; GO:0005520; F:insulin-like growth factor binding; IEA.

GO; GO:0001558; P:insulin-like growth; IEA.

R InterPro; IPR006208; Cye knot.

R InterPro; IPR006808; Insl_gro_fac_pr.

R InterPro; IPR000884; Ispl_gro_fac_pr.

R Ffam; PR00017; Cye knot; 1.

R Ffam; PR00019; IGFB; 1.

R Ffam; PR0019; IGFB; 1.

R SWART; SM00121; IEB; 1.

SWART; SM01221; IEB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4; Length 331;
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Lost in inflammatory breast cancer tumor suppressor protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29.6%; Score 626.5; DB 4; Length 36.2%; Pred. No. 4.5e-52; ive 50; Mismatches 118; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36909 MW; D109C2FDCA1DF549 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          323 CTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNC 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS50092; TSF]; 1.
SEQUENCE 331 AA; 36909 MW; DI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 36.23
Matches 122; Conservative
                                                                                                                        sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
Q9PSS6
ID Q9PSS
AC Q9PSS
DT 01-M
DT 01-O
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Pfam; PF00093; vwc; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=9913;
                                                                                                                                              NON TER
NON TER
SEQUENCE
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SEQUENCE
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Matches
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              RERETES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82 ASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQCTCIDGAVGCIPLCPQELSLP 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68 PEDGGGAGIC----EGDNCVFDGMIYRNGEIFQPSCKYQCTCRDGQIGCLPRCNLGLLLP 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      142 NLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAV 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 AACPRPCGGRCPAEPPRCAPGVPAVIDGCGCCLVCARQRGESCSPILPCDESGGLYCDRG 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
Jia J.D., Sedlaczek N., Bauer M., Wiecher D., Boigk G., Cho J.J.,
Jia J.D., Sedlaczek N., Edhuppath M., Riecken E.O., Schuppan D.;
Ruehl M., Riecken E.O., Schuppan D.;
"Connective tissue growth factor is produced by hepatic stellate cells
and upregulated in rat liver fibrosis.";
Submitted (FEB-1999) to the EMEL/GenBank/DDBJ databases.
EMEL; AJ236872; CAB41996.1; -.
InterPro; IPR00084; ISP.
InterPro; IPR00084; ISP.
InterPro; IPR00090; tsp_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124 GPDCPFPRKIEVPGECCEKWVC-----DPRDEV--LLG------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24 STCPAAC - HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFG
Gallus gallus (Chicken).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Archosauria, Aves, Neognathae, Galliformes, Phasianidae; Phasianinae;
                                                                                                                                                                                                                                     MEDLINE=92096871; PubMed=1756408;
Martinerie C., Perbal B.;
"Expression of a gene encoding a novel potential IGF binding protein in human tissues ";
C. R. Acad. Sci., III, Sci. Vie 313:345-351(1991).
GO: GO:0005576; C:extracellular; IEA.
GO: GO:000558; P:regularion of cell growth factor binding; IEA.
GO: GO:000558; P:regularion of cell growth; IEA.
InterPro; IPR000867; Inal gro_fac_pr.
InterPro; IPR010121; IB; 1.
SMART; SM00121; IB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155 -----TEWSACSKSCGMGFSTRVTNRN 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            202 GKGRSLKRLPVFGMEPRILYNPLOGOKCIVOTTSWSQCSKTCGTGISTRVTNDN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13; Length 176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
22.9%; Score 485.5; DB 13; Length
Best Local Similarity 40.2%; Pred. No. 8.9e-39;
Matches 94; Conservative 21; Mismatches 52; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18656 MW; 4FA69FFDB79B1C67 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE: PS00222; IGF BINDING; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
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176 1
176 AA;
                                                                                                                                                                                                            SEQUENCE FROM N.A.
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SEQUENCE
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Q9R2C0
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A Ishiwata H., Katsuma S., Kizaki K., Patel O.V., Nakano H.,
A Ishiwata H., Katsuma S., Kizaki K., Patel O.V., Nakano H.,
A Tshahashi T., Imal K., Hizasawa A., Shiojima S., Ikawa H., Suzuki Y.,
Takahashi T., Imal K., Hizasawa A., Shiojima S., Ikawa H., Suzuki Y.,
Tatujimoto G., Izaike Y., Todoroki J., Hashizume K.;
T "Characterization of gene expression profiles in early bovine
pregnancy using a custom cDNA microarray.";
Mol. Reprod. Dev. 65:9-18(2003).
R EMBL; AB098897; BAC56387.1; --
R InterPro; IPR006209; Cys_knot.
R InterPro; IPR006209; Cys_knot.
R Pfem; PP00001; Cys_knot; 1.
R PROSITE; PS01185; CTCK_1; 1.
R PROSITE; PS01225; CTCK_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       156 OCCREWYCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAYGKGRSLKRL-PVFG 214
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01-UTN-2003 (TrEMBLrel. 24, Last sequence update)
01-UTN-2003 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Similar to connective tissue growth factor precursor (Fragment).
Bos taurus (Bovine)
Bos taurus (Andata, Craniata, Vertebrata; Euteleostomi, Mammalia; Eutheria; Cetartiodactyla, Ruminantia; Pecora; Bovindea; Bovinde; Bovinde; Bovindes; Bovindes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 35;
                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 43.4%; Pred. No. 4e-28;
Matches 69; Conservative 21; Mismatches 34; Indels 35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 125;
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                                                                                                                                                                                                                                              128 128
128 AA; 13803 MW; F30142D0C491B7C7 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            215 MEPRILYNPLQGQKCIVQTTSWSQCSKTCGTGISTRVTN 253
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64 KCCEEWVCDEP-----
SMART; SM00214; VWC; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
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les 57; Conserv
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DB 4; Length 100;
Query Match
15.9%; Score 337; DB 4; Length 10
Best Local Similarity 40.0%; Pred. No. 1e-24;
Matches 64; Conservative 17; Mismatches 19; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-pgn2;
Kobayakawa H., Saitou N.;
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                216 BPRILYNPLQGQKCIVQTTSWSQCSKTCGTGISTRVTNDN 255
                                                                                                                                                                                                                                                                                                                                              -----TEWSACSKTCGMGISTRVTNDN 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DRC-2003 (TrEMBLrel. 23, Last annotation update)
FISP-12 protein (Fragment).
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InterPro; IPR006207; Cys knot_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AB039099; BAB68623.1; -AB039100; BAB68624.1; -AB039101; BAB68625.1; -AB039102; BAB68626.1; -
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AB039097; BAB68621.1;
AB039098; BAB68622.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam, PF00007, Cys knot, 1.
PROSITE, PS01185, CTCK 1, 1.
PROSITE, PS01225, CTCK 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 47.9°
Matches 56; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse)
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EMBL;
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Q91V29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Suppression subtractive hybridization identifies high glucose levels as a stimulus for expression of connective tissue growth factor and other genes in human mesangial cells.";

EMBL; AF079531; AAD02838.1;

InterPro; IPR006208; Cys.knot.

InterPro; IPR006208; Cys.knot.

InterPro; IPR00607; Cys.knot.

PR0871FS; SM00041; CT; 1.

PR0871FS; PS01225; CTC.2; 1.
                                                                                                                                 01-MAY-1999 (TrENBLrel. 10, Last sequence update)
01-MAX-2003 (TrENBLrel. 23, Last annotation update)
Connective tissue growth factor (Fragment).
Battus norvegicus (Rat).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
MEDLINE=92096871; PubMed=1756408;
Martinerie C., Perbal B.;
"Expression of a gene encoding a novel potential IGF binding protein in human tissues.";
C. R. Acad. Sci., III, Sci. Vie 313:345-351(1991).
                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=99150373; Pubwed=10026205;
Murphy M., Godson C., Cannon S., Kato S., Mackenzie H.S., Martin F.,
Brady H.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match
Best Local Similarity 55.1%; Pred. No. 4.8e-25;
Matches 59; Conservative 17; Mismatches 31; Indels C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KIYRAKFCGVCIDGRCCIPHRITILPVEFKCPHGBIMKKNMMFIKIC 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307 KKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSC 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 113 113 113 113 AM; 23EA69FCOA60635E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 100
100 AA; 10813 MW; C64EE2B9AD8A3299 CRC64;
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OFULE,
1. MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Potential IGF binding protein (Fragments).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C. R. Acad. Sci., III, Sci. Vie 313:345-351(1991).
InterPro; IPRO1007; VWF_C.
SMART; SMO0214; VWC; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
                                                                      113 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT; 100 AA
                                                                                                            01-MAY-1999 (TrEMBLrel. 10, Created)
                                                                   PRT;
                                                                PRELIMINARY;
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                                                                                                                                                                                                                                                                                     NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9606;
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NON TER
SEQUENCE
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SEQUENCE
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            RESULT 12
Q92164
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96 EGRPCEYNSRIYQNGESFQPNCQHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTG 155
                                                                                                                                                                                                                    156 QCCEEWVCDEDSIKDPMEDQDGLLGKELGFDASEVELTRNNELIAVGKGRSLKRLPVFGM 215
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SECUENCE FROM N.A.
STRAIN=Various strains;
Liu Y., Kitano T., Koide T., Shiroishi T., Moriwaki K., Saitou N.;
Liu Y., Kitano T., Koide T., Shiroishi T., Moriwaki K., Saitou N.;
"Conspicuous Differences among Gene Genealogies of 21 Nuclear Genes of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Liu Y., Kitano T., Koide T., Shirolshi T., Moriwaki K., Saitou N.; "Conspicuous Differences among Gene Genealogies of 21 Nuclear Genes of Five Mus musculus subspecies."; Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AB039094; BAB68618.1; -.
                                                                                                                1 DGAPCIFGGTVYRSGESFQSSCKYQCTCLDGAVGCMPLCSMDVRLPSPDCPFPRRVKLPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
NCBI_TaxID=10090,
60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15.9%; Score 336; DB 11; Length 119; 47.9%; Pred. No. 1.5e-24; tive 23; Mismatches 36; Indels
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262 KETRICEVRECGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCLSVKKYRPKYCGSCVDGR 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 KQSRLCMVRPCEADLEENIKKGKKCIRIPKIAKPVKPELSGCTSVKTYRAKFCGVCTDGR 61
2 KOSRLCMVRPCEADLEENIKKGKKCIRTPKIAKPVKFELSGCTSVKTYRAKFCGVCTDGR 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              322 CCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYNCPHANEAAFPFY--RLFNDI 376
                                             322 CCTPOLIRIVKMRFRCEDGETFSKNVMMIOSCKCNYNCPHANEAAFPFY--RLFNDI 376
                                                                           62 CCTPHRITILEVEFKCPDGEIMKKNYMFIKTCACHYNCPGDNDIFESLYYRKMYGDM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ju Y., Kitano T., Koide T., Shiroishi T., Moriwaki K., Saitou N., Conspicuous Differences among Gene Genealogies of 21 Nuclear Genes of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 CCTPHRITILDVEFKCPDGEIMKKNMMFIKTCACHYNCPGDNDIFESLYYRKMYGDM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2; Gaps
                                                                                                                                                                                                                                                                                                                                           Mus spicilegus (Steppe mouse).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
VCBI_TaxID=10103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
15.9%; Score 336; DB 11; Length 119;
Best Local Similarity 47.9%; Pred. No. 1.5e-24;
Matches 56; Conservative 23; Mismatches 36; Indels ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119 AA; 13626 MW; C7C8AD253DF331CE CRC64;
                                                                                                                                                                                                                                                   01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                              119 AA.
                                                                                                                                                                                                              PRT;
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PROSITE, PS01225; CTCK_2; 1.
NON TER
1 13626 MW
                                                                                                                                                                                                                                                                                                                       FISP-12 protein (Fragment) FISP-12.
                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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Search completed: April 22, 2004, 17:58:35 Job time : 39.6013 seca

Sequence 2, Appli Sequence 14, Appl Sequence 17, Appl Sequence 25, Appli Sequence 3, Appli Sequence 4, Appli Sequence 6, Appli Sequence 1, Appli Sequence 21, Appli Sequence 21, Appli Sequence 21, Appli Sequence 22, Appli Sequence 22, Appli Sequence 22, Appli Sequence 23, Appli Sequence 23, Appli Sequence 24, Appli Sequence 26, Appli Sequence 26, Appli Sequence 36, Appli

Sequence 2, Appl

Run on:

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1 MSSSTERTLAVAVTLLHTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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Best Local Similarity 100.0%; Pred. No. 5e-170;
Matches 379; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 11, Application US/08468847B
Retent No. 5780263
GENERAL INFORMATION:
APPLICANT: Hastings, Gregg A. and Adams, Mark D.
TITLE OF INVENTION: Human CCN-Like Growth Factor
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLIAN,
ADDRESSEE: CACCHI, STEWART & OLSTEIN
STREET: 6 BECKER FARM ROAD
STATE: NEW JERSEY
COUNTRY: USA
          US-08-468-8478-14
US-08-468-8478-14
US-08-468-8478-14
US-09-182-145-3
US-09-182-145-4
US-09-182-145-6
US-09-182-145-6
US-09-182-145-2
US-09-182-145-2
US-09-182-145-2
US-09-182-145-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURTUER READABLE FORM:

MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: 1BM PS/2
CURRENT APPLICATION DETR: 5.1
CURRENT APPLICATION DATA:
APPLICATION WIMBER: US/08/468,847B
FILING DATE: 6 June 1995
CLASSIFICATION WIMBER: 3108/468,847B
FILING DATE: 1 NFORWATION:
NAME: MULLINS, J. G.
REGISTRATION NUMBER: 33,073
REFERENCY LOOP NUMBER: 33,073
REFERENCY LOOP 1 NFORWATION:
TELEPHONE: 201-994-170
TELEPHONE: 201-994-170
TELEPHONE: 201-994-170
TELEPHONE: CARRACTERISTICS:
COMPUTER: CARRACTERISTICS:
COMPUTER: CARRACTERISTICS:
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MOLECULE TYPE: PROTEIN
US-08-468-8478-11
  JS-08-468-847B-11
758.5
758.5
622
622
622
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                                                                                                                        April 22, 2004, 17:54:44; Search time 16.4566 Seconds (without alignments) 1188.962 Million cell updates/sec
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                                                                                                                                                                                                     US-09-495-448A-2
2103
1 MSSSTFRTLAVAVTLLHLTR.......PNEASFRLYSLFNDIHKFRD 379
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Sequence 2
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1: /cgn2_6/ptodata/2/laa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/laa/6B_COMB.pep:*
3: /cgn2_6/ptodata/2/laa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/laa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
5: /cgn2_6/ptodata/2/laa/PCTUS_COMB.pep:*
                  GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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US-09-348-815-2
US-08-468-8478-12
US-08-468-8478-12
US-08-468-8478-13
US-09-582-337-2
US-09-582-337-2
US-09-142-569-6
US-09-142-569-6
US-08-157-628-2
US-08-157-628-2
US-08-157-628-2
US-08-157-628-2
US-08-157-628-2
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US-08-157-628-2
US-08-459-717-2
US-08-459-717-2
US-08-459-717-2
US-08-459-717-2
US-08-649-034-368-2
US-09-054-368-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                          protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Match
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Perfect score:
                                                                                                                                                                                                                                                                                Scoring table:
                                                                                          protein
                                                                                                                                                                                                                                             Sequence:
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Result

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240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301 CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHP 360
                                                                                                                                       120
                                                                                                                                                                            61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
                                                                                                                                                                                                                                 121 CTCIDGAVGCIFLCPQELSLPNLGCPNFRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                                                              121 CTCIDGAVGCIPLCPQELSLPNÍGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                       241 CGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301 CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMIQSCKCNYNCPHP 360
                                                                                          9
                                                                                       1 MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                       61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCKHO
                                                                                                                                                                                                                                                                                                                             LDASEVELTRNNELIAIGKGSSLKRLPVPGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADAMS, MARK D
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR-2
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
SITERI: 9410 KEY WEST AVENUE
CITY: ROCKVILLE
STATE: MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4; Length 381;
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MEDIUM TYPE: RIOPPY disk

MEDIUM TYPE: RIOPPY disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOTTWARE: PatentIn Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

RILING DATE: 08-Jul-1999

FILING DATE: 08-Jul-1999

ATTORNEY GARTI INFORMATION:

ATTORNEY GARTI INFORMATION:

NAME: JONATHAN L. KLEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 41,119
REFERENCE/DOCKET NUMBER: PF126P1D1
TELECOMMUNICATION INFORMATION:
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92.2%; Score 1938;
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HOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-348-815-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2, Application US/09348815
Patent No. 6534630
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 381 amino acide
TYPE: amino acid
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V FOR SEQ ID NO: 2:
Conservative
379;
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US-09-348-815-2
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                                                                                  61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCENNSRIYQNGESFQPNCKHQ 120
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1 MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
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Patent No. 6413735
GENERAL INFORMATION:
APPLICANT: Lau, Lester F.
TITLE OF INVENTION: Extracellular Matrix Signalling Molecules NUMBER OF SEQUENCES: 177
CORRESPONDENCE ADDRESS:
ADDRESSEB: Marshall, O'Toole, Gerstein, Murray & Borun STREET: 6100 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY; misc feature; OTHER INFORMATION: "Mouse Cyr61 amino acid sequence"; SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-142-569-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 2103; DB 4; Length 379; Pred. No. 5e-170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: 6300 Sears Tower, 233 SOUTH MACKET DITYCE
CTTY: CTALGAGG
STATE: Illinois
COMPUTE: Illinois
COMPUTER READABLE FORM:
MEDIOM TYPE: PLOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,569
FILING DATE: 02-APPT-1999
CLASSIFICATION NUMBER: US/09/142,569
FILING DATE: 02-APPT-1999
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REFERENCE/DOCKET NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 28758/33766
TELEPRONE: 312/474-6300
TELEPRONE: 312/474-6300
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356
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                                                                                                                                                                                                   1 MSSSTFRTLAVAVTLIHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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                                                                                         Length 381;
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; Sequence 12, Application US/08468847B
; Patent No. 5780263
; GENERAL INFORMATION:
APPLICANT: Hastings, Gregg A. and Adams, Mark D.
TITLE OF INVENTION: Human CCN-Like Growth Factor
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILIAN,
ADDRESSEE: CECTHI, STEMART & OLSTEIN
STATE: ROSELAND
STATE: NEW JERSEY
COUNTRY: USA
COUNTRY: USA
                                                                                      Query Match 91.7%; Score 1929; DB 4; I
Best Local Similarity 90.9%; Pred. No. 2.6e-155;
Matches 348; Conservative 10; Mismatches 19;
  ; SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-09-142-569-4
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6 June 1995
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MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: IBM PS/2
OPBEATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/468,847
FILING DATE: 6 June 1995
CLASSIFTCATION: 435
PRIOR APPLICATION DATA:
APPLICATION DATA:
PILING DATE:
FILING DATE:
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NAME: MULLINS, J.G.
REGIETRATION NUMBER: 33,073
REFRENCE/DOCKET NUMBER: 3258
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                             61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFOPNCKHQ 120
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                                                                                                                                                                                                                                                                                                                                                                                                                      179 --LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ 236
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                                                                                                                                     1 MSSRIARALALVVILLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
                                                                                   1 MSSSTRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                Gaps
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TITLE OF INVENTION: Extracellular Matrix Signalling Molecules
NUMBER OF SEQUENCES: 1.7

CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
OTHER INFORMATION: "Human Cyr61 amino acid sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CITYEL: 6300 Sears Tower, 233 South Wacker Drive CITYE. Chicago STATE: Illinois COUNTRY: United States of America CONDYTR: Illinois COMPUTER READBLE FORM:

MEDIUM TYPE: Floppy disk COMPUTER: EN PC COMPALIBLE COMPUTER: PatentIn Release #1.0, Version #1.30 COMPUTER: DatentIn Release #1.0, Version #1.30 COMPUTER: 02-Apr-1999 CLASSIFICATION NUMBER: US/09/142,569 FILING DATE: 02-Apr-1999 CLASSIFICATION: Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W. REFERENCE/DOCKET NUMBER: 36.107
REFERENCE/DOCKET NUMBER: 28758/33766
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
91.4%; Fred. No. 4.5e-156;
ive 9; Mismatches 18; Indels
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Patent No. 6413735
GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
                                Conservative
  Best Local Similarity
Matches 350; Conserv
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                                                                                                                                                                                                                                                          86.2%; Score 1812.5; DB 2; Length 375; 88.0%; Pred. No. 1.8e-145; ive 10; Mismatches 28; Indels 7;
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TITLE OF INVENTION: Human CCN-Like Growth Factor
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILIAN,
ADDRESSEE: CECCHI, STEWART & OLSTEIN
STREET: 6 BECKER FARM ROAD
CITY: ROSELAND
STREET: NBW JERSEY
COUNTRY: USA
ZIP: 07068
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MEDIUM TYPE: 3.5 INCH DISKETTE
COMPUTER: 18M PS/2
CURRENT APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 6 June 1995
CLASSIFICATION: 435
PRICK APPLICATION ON TA:
APPLICATION NUMBER:
FILING DATE:
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-468-847B-13
; Sequence 13, Application US/08468847B
Patent No. 5780263
; GENERAL INFORMATION:
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TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                            LENGTH: 375 AMINO ACIDS
TYPE: AMINO ACID
STRANDEDNESS:
TOPOLOGY: LINEAR
MOLECULE TYPE: PROTEIN
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Matches 331, Conserv
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                                                                                                                                                                                                                                                                  1 MSSSTFRILAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
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                                                                                                                                                                                                                                                                                                      1 MSSRIVRELALVVTLLHLTRVGLSTCPADCHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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                                                                                                                                                                 Query Match 86.5%; Score 1819.5; DB 1; Length 374; Best Local Similarity 88.3%; Pred. No. 4.7e-146; Matches 332; Conservative 10; Mismatches 27; Indels 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: 11, ET AL.
TITLE OF INVENTION: Connective Tissue Growth Factor-2
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN,
ADDRESSEE: CEARLIA, BYRNE, BAIN, GILFILLAN,
STREET: 6 BECKER FARM ROAD
CITY: ROSELAND
STATE: NEW JERSEY
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 0706
COMPUTER READABLE FORM:
MEDIUM TYPE: 35 INCH DISKETTE
COMPUTER: 1EM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WOORD PERRECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/459,101A
FILING DATE: Unne 2, 1995
CLASSIFICATION: 536
FRIOR APPLICATION DATA:
APPLICATION UNMER: PCT/US94/07736
FILING DATE: 12 JUL 94
ATTORNEY/AGENT INFORMATION:
NAME: FERRARC, GREGORY D.
REGISTRATION NUMBER: 35,134
REFISENCE/DOCKET NUMBER: 35,317
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/08459101A
Patent No. 5945300
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 359 NCPHANEAAFPFYRLF 374
LENGTH: 374 AMINO ACIDS
TYPE: AMINO ACID
STRANDEDNESS:
TOPOLOGY: LINEAR
MOLECULE TYPE: PROTEIN
US-08-468-847B-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
US-08-459-101A-2
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APPLICANT: SCHNIDT, Brian
APPLICANT: SCHNIDT, Brian
APPLICANT: SCHNIDT, Brian
APPLICANT: SVENDENUP, France
APPLICANT: SVENDENUP, France
APPLICANT: CARMICHAEL, David
APPLICANT: CARMICHAEL, David
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR (CTGF) AND METHODS OF UI
FILE REFERENCE: FIBEROLIO - 18/09/292,036
CURRENT APPLICATION NUMBER: US 09/292,036
FRIOR FILING DATE: 1999-04-14
FRIOR FILING DATE: 1999-04-14
FRIOR FILING DATE: 1999-11-06
FRIOR PRICE FILING DATE: 1999-11-06
FRIOR APPLICATION NUMBER: US 09/187,478
FRIOR PRICE SEQ ID NOS: 18
SOFTWARE: PATENT NOS: 18
SOFTWARE: PATENT NOS: 18
CHARLES FRIOR FILING DATE: 1998-11-06
FRIOR PRICE FRIOR OF SEQ ID NOS: 18
CONTACTOR OF SEQ ID NOS: 18
CO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       118 KHOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEFWVCDEDSIKDSLDDQDD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 QLGELCTERDPCDPHKGLFCDFGSPANRKIGVCPAK-DGAPCVFGGSVYRSGESFQSSCK 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                            168 ------RANKTVVGPALAAYRLEDIFGPDFTWM------RANCLVQTTEWSAC 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238 SKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLXKGKKCSKTKKSPEPVRFT 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59 QLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCK 118
                                                                                                                                                                                                                                                                                                     119 HQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDL 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    298 YAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNC 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MSSSTFRTLAVAVTLIHL-TRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCA
                                                                                                                    1 MLASVAGPVSLÁLVLÍLCTRPATGODCSAQCQCAREAAPRCPAGÝSLVLDGCGCCRVCAK
                                                                                                                                                                                                                                                                                                                                  120 YQCTCLDGAVGCVPLCSMDVRLPSPDCPFPRRVKLPGKCCEEWVCDEP------
                                                                                                                                                                                                                                                                                                                                                                                                                         179 LGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQTTSWSQC
                                                                1 MSSSTFRTLAVAVTLLHLTRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCAK
   Gaps
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   38;
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   61; Mismatches 104; Indels
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45.5%; Score 957.5; DB 4;
Best Local Similarity 46.8%; Pred. No. 3.4e-73;
Matches 178; Conservative 60; Mismatches 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | |: || : | |
PGDNDIFESLYYRKMYGDM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 3, Application US/09292036; Patent No. 6358741; GENERAL INFORMATION: APPLICANT: FIBROGEN, INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHPNEASFRLY -- SLFNDI 374
   Matches 176; Conservative
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Sequence 2, Application US/09582337

Patent No. 656618

GENERAL INFORMATION

APPLICANT: Japan Tobacco, Inc.

TITLE OF INVENTION: Monoclonal Antibody Against Connective Tissue Growth Factor

TITLE OF INVENTION: and Medicinal Uses Thereof

TITLE OF INVENTION: and Medicinal Uses Thereof

TITLE OF INVENTION: and Medicinal Uses Thereof

CURRENT APPLICATION NUMBER: US/09/582,337

CURRENT FILING DATE: 1000-06-23

PRIOR FILING DATE: 1997-12-25

PRIOR FILING DATE: 1997-12-15

PRIOR FILING DATE: 1997-12-15

NUMBER OF SEQ ID NOS: 27

SOFTWARE: Patentin Ver. 2.0

SEQ ID NO 2

LENGTH: 347
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240 TGISTRVINDNPDCKLIKETRICEVRPCGQPSYASLKKGKKCTKTKKKSPSPVRFTYAGCS 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SVKKYRPKYCGSCVDGRCCTPLQTRTVKWRFRCEDGEMFSKNVMMIQSCKCNYNCPHPNE 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300 SVKKYRPKYCGSCVDGRCCTPQQTRTVKIRFRCDDGETFTKSVMMIQSCRCNYNCPHANE 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       69 PCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQCTCIDGAV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69 PCDHTKGLECNFGASPAATNGICRAQSEGRPCEYNSKIYQNGESFQPNCKHQCTCIDGAV 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               185 EVELTRINNELIAIGKGSSLKRLPVFGTEP--RVLFNPLHAHGOKCIVQTTSWSQCSKSCG 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCS 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCIPLCPOELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDL----LGLDAS 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 ALAAALICLARLALGSPCPAVCQCPAAAPQCAPGVGLVPDGCGCCKVCAKQLNEDCSRTQ 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10 AVAVTLLHLTRLAL-STCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQ 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 78.3%; Score 1646.5; DB 1; Length 375; Best Local Similarity 80.1%; Pred. No. 2e-131; Matches 302; Conservative 22; Mismatches 36; Indels 17;
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REGISTRATION VINDER: 33,073
REGISTRATION VINDER: 325800-442
FELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
TELEPAX: 201-994-1744
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 375 AMINO ACIDS
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363 ASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360 A-YPFYRLVNDIHKFRD 375
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                                                                                                                                                                                                                                                                                                  STRANDEDNESS:
TOPOLOGY: LINEAR
MOLECULE TYPE: PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
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; ORGANISM: Rat
US-09-582-337-2
                                                                                                                                                                                                                                                                                                                                                                                         ,
US-08-468-847B-13
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267
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118 KHOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDD 177
                                                                                                                          ------KDRTÅVĞPALAAYRİBDTFĞPDPTMM-----RANCLVQTTBWSA 207
                                                                                                                                                                      237 CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF 296
                                                                                                                                                                                                                                                         297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRPRCEDGEMFSKNVMMIQSCKCNYN 356
                                                                                                                                                                                               LLGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Lau, Lester F.
TITLE OF INVENTION: Extracellular Matrix Signalling Molecules
NUMBER OF SEQUENCES: 17
                                       120 KYOCTCLDGAVGCVPLCSMDVRLPSPDCPPRRVKLPGKCCKEWVCDEP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIREET: 0310 Segis lower, 233 South machel CITY: Chicago STATE: Illinois COUTRY: United States of America ZOUTRY: United States of America ZIP: 6606-6402 COMPUTER READABLE FORM:
MEDIUM TYPE: Bloppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/142,569 CLASSICATION NUMBER: US/09/142,569 CLASSICATION: UNING W. STREETCATION NUMBER: 28758/33766 TELEGRATION NUMBER: 28758/33766 TELEGRATION INFORMATION:
TELEGRATION NUMBER: 28758/33766 TELEGRATION NUMBER: 28758/33766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
STREET: 6300 Sears Tower, 233 South Wacker Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: misc feature
OTHER INFORMATION: "Fisp12 amino acid sequence"
SEQUENCE DESCRIPTION: SEQ ID NO: 6:
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llarity 46.6%; Pred. No. 7.5e-73;
Conservative 61; Mismatches 103;
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TELEFAX: 312/474-0448
TELEX: 25-3866
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 348 amino acide
TYPE: amino acide
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                      CPGDNDIFESLYYRKMYGDM 347
                                                                                                                                                                                                                                                                                                                                               CPHPNEASFRLY -- SLFNDI 374
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Patent No. 6413735
GENERAL INFORMATION:
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Best Local Similarity
Matches 177; Conserva
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LIGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ 236
                                                                                                                                                                    297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356
                                                                                                                                                                                                  268 BLSGCTSVKTYRAKFCGVCTDGRCCTPHRITTLPVBFKCPDGBIMKKNMMFIKTCACHYN 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58 KQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNC 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ------RDRTAVGPALAAYRLEDTFGPDPTMM------RANCLVQTTBWSA 207
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                                                                                                                 CSKTCGMGISTRVINDNIFCRLEKQSRLCMVRPCEADLEENIKKGKKCIRIPKIAKPVRF
                                                                                237 CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MSSSTPRTLAVAVTLIHL-TRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLASVAGPISLALVLÍALCTRPATGODCSAQCQCAABAAPHCPAGVSLVLDGCGCCRVCA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 348;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                           Sequence 15, Application US/08468847B; Patent No. 780263; Patent No. 780263; GENERAL INFORMATION: JAPPLICARTIC HUMAN CCN-Like Growth Factor NUMBER OF EQUENCES: 20; CORRESPONDENCE ADDRESS: ADDRESSE: ADDRESSE: CARELLA, BYRNE, BAIN, GILFILIAN, ADDRESSEE: CECCHI, STEWRYT & OLSTEIN STREET: 6 BECCRE FARM ROAD; STREET: 6 BECCRE FARM ROAD; STATE: NOSELAND; STATE: USA JESEY
COUNTRY: USA JESEY
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
45.3%; Score 953.5; DB 1;
Best Local Similarity 46.6%; Pred. No. 7.5e-73;
Matches 177; Conservative 61; Mismatches 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEILALINE, J.G.
NAME: MULLINS, J.G.
RECISTRATION NUMBER: 33,073
REFERENCE/DOCKET NUMBER: 325800-442
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/468,847B
                                                                                                                                                                                                                                                                                       CPGDNDIFESLYYRKMYGDM 347
                                                                                                                                                                                                                                                         CPHPNEASFRLY--SLFNDI 374
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 June 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
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AMINO ACID
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 348 AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 6 June 19
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
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COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCI
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                                          29
                                                                                                                  53 CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES
                                                                                                                                                                                                                                                                                               204 TEWSACSKTCGWGISTRVTNDNASCRLEKQSRLCWVRPCBADLEENIKKGKKCIRTPKIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 292 BPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSC
MSSSTRTLAVAVTLLHLTRLALSTCPAA-----CHCPLE-APKCAPGVGLVRDGCGC
                                                                                                                                                                                                                                                                   173 DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INFORMATION:
CONNESSONDENCE ADDRESS:
ADDRESSES: Spensley Horn Jubas & Lubitz
STREET: 4225 Executive Square, Suite 1400
CITY: La Jolla
STATE: CONNESSONDENCE ADDRESS:
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/386,680
FILING DATE: 10-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Wetherell, Jr. Ph.D., John W. REGISTRATION NUMBER: 31,678
REPERENCE/DOCKET NUMBER: PD-1294
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-455-5100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      352 KCNYNCPHPNEASFRLY -- SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 324 ACHYNCPGDNDIFESLYYRKMYGDM 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 10-FEB-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/167,628
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APPLICATION NUMBER: US/07/752,427
FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-386-680-2; Sequence 2, Application US/08386680; Patent No. 5585270
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LENGTH: 349 amino acid
TYPE: amino acid
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-386-680-2
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                                                 CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRF 296
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                                                                                                                                                                                                                                                                                                                                                                                                           KQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNC 117
                                                                                                           KHOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCBEWVCDBDSIKDSLDDQDD 177
                                                                                                                                                     120 KYQCTCLDGAVGCVPLCSMDVRLPSPDCPFPRRVKLPGKCCKEWVCDEP-----
                                                                                                                                                                                                                                                                                                                   208 CSKTCGMGISTRVTNDNTFCRLEKQSRLCMVRPCBADLBENIKKGKKCIRTPKIAKPVKF
                                                                                                                                                                                                178 LIGIDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGOKCIVQTTSWSQ
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45.2%; Score 950; DB 1; Length 349;
Best Local Similarity 45.7%; Pred. No. 1.5e-72;
Matches 176; Conservative 64; Mismatches 97; Indels
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APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR
NUMBER OF SECUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Spensley Horn Jubas & Lubitz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRIE US
ZIE: 92037

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/167,628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ALUKESSEE: Spensley Horn Jubas & Lubitz STREET: 4225 Executive Square, Suite 1400 CITY: La Jolla STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/752,427
FILING DATE: ATTORNEY, AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., John W. REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD-1294
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   328 CPGDNDIFESLYYRKMYGDM 347
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Patent No. 5408040
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MOLECULE TYPE: protein US-08-459-717-2
linear
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STATE: CO
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                                                                                                                                                            CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES 112
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                                                                                                                                                                                                                                                                                                                                                                                                                                               292 EPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSC 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    264 KPIKFELSGCTSMXTYRAKFCGVCTDGRCCTPHRTTTLPVEFKCPDGEVMKKNNMFIKTC 323
                                                                                                            1 MSSSTFRTLAVAVTLLHLTRLALSTCPAA-----CHCPLE-APKCAPGVGLVRDGCGC
                                                                                                                                                                                                                                                                                                     173 DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQT
                                                                                                                                                                                                                                                                                                                                                                          TSWSQCSKSCGTGISTRVTNDNPECRLVXETRICEVRPCGQPVXSSLKKGKKCSKTKKSP
                                                     Gaps
                                                     48;
               45.2%; Score 950; DB 1; Length 349;
45.7%; Pred. No. 1.5e-72;
ive 64; Mismatches 97; Indels
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Patent No. 5770209
GENERAL INFORMATION:
APPLICANT: Grotendorst, Gary R.
APPLICANT: Bradham Jr., Douglas M.,
TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
ADDRESSEE: Spensley Horn Jubas & Lubitz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER SEADABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM FC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/459,717
FILING DATE: 02-JUN-1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/752,427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUNESSEE: Spensley Horn Jubas & Lubitz STREET: 4225 Executive Square, Suite 1400 CITY: La Jolla STATE: CA CONMUN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 30-AUG-1991
ATTORNEY/AGENT INFORMATION:
NAME: Wetherell, Jr. Ph.D., John W. REGISTRATION UNDERS: 31,678
REFERNCE/DOCKET NUMBER: 9D-1294
TELECOMMUNICATION INFORMATION:
TELEPHONE: 619-455-5110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     352 KCNYNCPHPNEASFRLY -- SLFNDI 374
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LENGTH: 349 amino acids
TYPE: amino acid
                                  Best Local Similarity 45.7
Matches 176; Conservative
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                                                                                                    1 MSSSTFRTLAVAVTLLHLTRLALSTCPAA-----CHCPLE-APKCAPGVGLVRDGCGC
                                               48; Gaps
Length 349;
Query Match 45.2%; Score 950; DB 1; Length 34 Best Local Similarity 45.7%; Pred. No. 1.5e-72; Matches 176; Conservative 64; Mismatches 97; Indels
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| Factor No. 5783187
| GENERAL INFORMATION:
| APPLICANT: Grotendorst, Gary R. APPLICANT: Bradham Jr., Douglas M.,
| TITLE OF INVENTION: CONNECTIVE TISSUE GROWTH FACTOR NUMBER OF SEQUENCES: ADDRESSES: Spensley Horn Jubas & Lubitz
| STREE: 4225 Executive Square, Suite 1400 |
| STATE: CA
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MEDIUM TYPE: READABLE FORM:
MEDIUM TYPE: READABLE FORM:
COMPUTER: IBM PC COMPAIDLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/712,302
FILING DATE: 11.58P-1996
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/386,680
FILING DATE: 10-FEB-1995
APPLICATION NUMBER: US/08/167,628
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NAME: Wetherall, 'Ur. Ph.D., John W.
REGISTRATION NUMBER: 31,678
REFERENCE/DOCKET NUMBER: PD-1294
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Best Local Similarity 45.7%; Pred. No. 1.5e-72;
Matches 176; Conservative 64; Mismatches 97; Indels 48; Gaps
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; TELECOMUNICATION INFORMATION:
; TELEPHONE: 619-455-5100
; TELEFAX: 619-455-5100
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 349 amino acids
; TYPE: amino acids
; TYPE: amino acid
; TYPE: QUINCAY: linear
; MOLECULE TYPE: protein
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Search completed: April 22, 2004, 18:00:05 Job time : 17.4566 secs

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WPI; 1992-243508/30.
N-PSDB; AAQ26421.
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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| Mouse Murine Mouse | Aae05922 Mouse fib Abb09205 Fisp-12 C Abr43139 Mouse con | | Aaw62084 Human con Aaw81425 Connectiv Aay18361 Human con Aay92939 Human con | Human Human Amino | Aab90791 Human she Aab60664 Human con Aab48831 Human con |
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| 6 ADB25762 2 AAW35731 3 AAY44756 | | | 2 AAW62084 2 AAW81425 2 AAY18361 3 AAY92939 | | 4 AAB90791 4 AAB60664 4 AAB48831 |
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| 26 27 28 | 9898 | 1 (C) (C) (C) | 9 7 8 9 | 4 4 4 0 1 3 | 4 4 4 6 4 8 |

ALIGNMENTS

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growth factor beta; induced; CEF-10; v-src; chicken; embryo; TGF-beta.
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AAR25565 standard; protein; 379 AA.
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                                                                                                                                                                                                                                                                                                                                                                                    91US-00642991.
92US-00816270.
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                                                                         (revised)
(first entry)
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TGF-beta induced gene family - encodes proteins involved in growth and differentiation effects of TGF-beta-1.

Claim 2; Fig 1; 35pp; English

The protein sequence was deduced from the DNA sequence obtd. by screening a cDNA library made from AKR-2B mouse cells induced with TGF-betal and cyclohexamide with two probes from untreated AKR-2B mRNA and AKR-2B mRNA are actions calls treated with cyclohexamide and TGF- betal. The proteins encoded by hybridising colonies (beta-IG-M1 and beta-IG-M2) contain 38 cys residues and are induced by TGF-betal. Beta-IG-M2 displays 80 percent homology to the CEF-10 protein induced by v-src in chicken embryo fibroblasts and is identical to the protein encoded by cyrel, and immediate early response gene induced in quiescent BALB 3T3 cells by immediate early response gene induced in quiescent BALB 3T3 cells by serum treatment. Residues 49-56 of beta-IG-M1 conform to the GCGCCXXC motif reported in the amino half of insulin-like growth factor (IGF)

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Sequence 379 AA;
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binding proteins. The C-terminal Cys rich region of beta-IG-Mi, -M2 and CEF-10 contain an amino acid sequence with strong homology to a motif found near the C-terminal of the malarial circumsporozoite (CS) protein, which is highly conserved among all species of malarial parasites stequenced to date (designated region II). This motif is also found in and cell-extraor which have cell adhesive properties that mediate cell-cell and cell-extraorlular matrix interactions, such as properdin, thrombospondin, and TRAP. The proteins encoded by TGF-beta induced genes are likely to be involved in mediation of the biological effects of TGF-beta relating to cell growth and differentiation. See also AAR25566. (Updated on 25-MAR-2003 to correct PN field.)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  CSSVKKYRPKYGGSCVDGRCCTPLQTRTVKARFRCEDGEMFSKAVAMIQSCKCNYNCPHP
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                                                                                                                                                                   Length 379;
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                                                                                                                                                                  100.0%; Score 2103; DB 2;
100.0%; Pred. No. 2.7e-155;
tive 0; Mismatches 0;
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/note= "Cysteine free region"
224. .240
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Best Local Similarity 100."
Matches 379; Conservative
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                                                                                                                                             Sequence 379 AA;
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The invention relates to extracellular matrix (ECM) signalling molecules involved in cellular response to growth factors. More particularly the involved in cellular response to growth factors. More particularly the involved in directed to cysteine-rich protein (Cyrel), and connective tissue such as fibroblast secreted protein (Frighl2) and connective tissue growth factor (CTGF) and nucleic acid molecules encoding such proteins. The polypeptides of the invention are members of cysteine-rich secreted protein family. Human Cyrel fragment is useful in methods for screening modulators of cell adhesion, cell migration, fibroblast cell confiferation, angiogenesis, wound healing and Cyrel-integrin receptor interaction. Modulator of Cyrel-integrin alphavbeta3 interaction is used for the preparation of a medicament for the treatment of atherosclerosis, heart disease, tumour metastasis, fibrosis, tumour growth, disorders associated with inadequate angiogenesis; aberrant granulation tissue development; abserrant fibroblast growth and wounds. Polymucleotides of the invention are useful in gene therapy. The present sequence is mouse
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel human cysteine-rich protein 61 (Cyr61) fragment useful in methods for screening for modulators of cell adhesion, fibroblast cell proliferation, angiogenesis and cell migration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSR1YONGESFOPNCKHO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGIGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MSSSTFRTLAVAVTLIHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMIQSCKCNYNCPHP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Fig 1; 186pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                         Greenspan JA;
                                                                     31-JAN-2000; 2000US-00495448.
15-MAY-2000; 2000US-0204364P.
06-OCT-2000; 2000US-0238705P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-JAN-2001; 2001WO-US003267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100. Matches 379; Conservative
                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-465561/50.
N-PSDB; AAD11220.
                                                                                                                                                                                                                                (MUNI-) MUNIN CORP.
                                                                                                                                                                                                                                                                                                         Yeung C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
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2,
                                         360
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          178
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    CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHP 360
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                          301 CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKUVMMIQSCKCNYNCPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CICIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDL--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVTGQCCSEWVCDEDSIKDPMEDQDGLLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 KELGFDASEVELTRINDELIAVGKGSSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSSRIARALALWVTLLHLITRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFOPNCKHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      179 -- LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSSSTFRILAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               - useful for the long term
                                                                                                                                                                                                                                                                                                                                                                                          monocyte; mature; differentiation factor; MMDF; macrophage;
immune activator; tissue culture; infectious disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 381;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 92.2%; Score 1938; DB 2; Best Local Similarity 91.4%; Pred. No. 1.9e-142; Matches 350; Conservative 9; Mismatches 18;
                                                                                                                                                                                                                                                                                                                                                 Human monocyte mature differentiation factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A monocyte mature differentiation factor tissue culture of macrophage(s).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 9; Page 12-13; 22pp; Japanese.
                                                                                                                                                                                                                              Ş
                                                                                  361 NEASFRLYSLFNDIHKFRD 379
                                                                                                                     361 NEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                           AAW35957 standard; protein; 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               96JP-00075236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      96JP-00075236
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (TOYM ) TOYOBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JP09234079-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-MAR-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-SEP-1997.
                                                                                                                                                                                                                                                                                                            05-MAR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         237
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                                                                                                                                                                                                                                                                     AAW35957;
    301
                                                                                                                                                                                                                                                                                                                                                                                                                  cancer;
                                                                                                                                                                                                                                                                                                                                                                                            Human:
                                                                                                                                                                                    RESULT 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention describes human small CCN-like growth factor (SCGF). SCGF has vulnerary and osteopathic activities, and can be used in gene therapy. The SCGF polypeptides and polynucleotides can be used for treating muscle wasting diseases, and osteoporosis, and to stimulate wound healing and tissue regeneration, to promote angiogenesis and to stimulate proliferation of vascular smooth muscle and endothelial cell production. The present sequence represents a CNN family protein which is given in comparison with the human SCGF in the exemplification of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEBWVCDEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGTGISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel isolated polynucleotide sequence encoding a human small CCN-like growth factor, useful for treating muscle wasting disease, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LDASEVELTRINELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGGKCIVQTTSWSQCSKS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                Human, small CCN-like growth factor; SCGF; vulnerary; osteopathic; gene therapy; muscle wasting disease; osteoporosis; wound healing; tissue regeneration; angiogenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 379;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                           Mouse cyr6 CNN family protein sequence SEQ ID NO:11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 2103; DB 5;
100.0%; Pred. No. 2.7e-155;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure, Fig 2A-D; 33pp; English.
                   ABB09201 standard; protein; 379 AA
                                                                                                                                                                                                                                                                                                                                                                                          14-MAY-2001; 2001US-00853625.
                                                                                                                                                                                                                                                                                                                                                                                                                               95US-00468847.
                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Adams MD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (HAST/) HASTINGS G A. (ADAM/) ADAMS M D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2002-382150/41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 379 AA;
                                                                                                                                                                                                                                                                                                        US2002049304-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hastings GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 osteoporosis
                                                                                                                                                                                                                                                                                                                                                                                                                               06-JUN-1995;
01-APR-1998;
                                                                                                    08-JUL-2002
                                                                                                                                                                                                                                                                                                                                                 25-APR-2002
                                                            ABB09201;
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TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRIVKWRFRCEDGETFSKNVMIQSCKCNYN 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to a method of inhibiting proliferation of uterine lejomyoma or preventing uterine lejomyoma formation. The method comprises increasing the level of Cyr61 in lejomyoma fination. The method invention also describes compounds and compositions that stimulate induction of the Cyr61 gene and compounds that increase Cyr61 activity. The compositions and the method of the invention are useful for preventing uterine lejomyoma formation or inhibiting proliferation of uterine lelomyoma formation or inhibiting proliferation of treating or preventing uterine leiomyoma formation, or inhibiting proliferation of uterine leiomyoma in a subject. The present sequence represents human Cyr61. Note: The present sequence sequence order in the figure. The start of the sequence is shown on page 8/10 of the figures and the rest of the
KELGFDASEVELTRNNELIAVGKGSSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ
                                                                 239 CSKTCGTGISTRVTNDNPBCRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF
                                                                                                                      TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; uterine leiomyoma proliferation; uterine leiomyoma formation; Cyr61; cytostatic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Preventing uterine leiomyoma formation or inhibiting proliferation uterine leiomyoma in subject, comprises modulating or increasing th level of Cyr61 in leiomyoma tissue.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhu Y, Winneker R;
                                                                                                                                                                                                    CPHPNEASFRLYSLFNDIHKFRD 379
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                                                                                                                                                                                                                                                                                                                                                AAU79761 standard; protein; 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (AMHP ) AMERICAN HOME PROD CORP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sampath D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human Cyr61 protein.
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Best Local Simi
Matches 350;
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                   TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356
                                                                                                                                                                                                                                                                                                                                                                                                           shear stress-response protein; vascular disease; arteriosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --LGLDASEVELTRNNELIAIGKGSSEKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMIJGSCKCNVN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sakurada K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention provides the protein and coding sequences of a number of human shear stress response proteins. These are useful in diagnosis, treatment and screening of vascular diseases caused by arteriosclerosis, including heart failure, post-PTCA restenosis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequences, proteins encoded by them and antibodies against ful in diagnosis and treatment of vascular disease caused by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                  Human shear stress-response protein SEQ ID NO: 46.
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Best Local Similarity 91.4%; Pred. No. 1.9e-142;
Matches 350; Conservative 9; Mismatches 18;
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Sugano S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 60; Page 345-346; 678pp; Japanese.
                                                                                                  CPHPNEASFRLYSLFNDIHKFRD 379
                                                                                                                          Obayashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yoshisue H, Obayashi
ekine S, Nakamura Y,
                                                                                                                                                                                                                                          AAB90773 standard; protein; 381
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                                                                                                                                                                                                                                                                                                                          (first entry)
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F. Sekine S,
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N-PSDB; AAH02896.
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Kuga T,
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        cell proliferation by blocking sex steroid induced and growth factor is epidermal, heparin binding epidermal or basic fibroblastic growth factor is epidermal, heparin binding epidermal or basic fibroblastic growth factor. (I) can be used to diagnose or stage breast cancer where the level of Cyr61 in a positive/suspect breast cancer call is compared to the level in a normal increase in the level of Cyr61 compared to the level in normal tissue indicates the presence of breast cancer. The level of Cyr61 being determined by exposing the tissues to (I), and an increase in the level of bound antibody by the suspect/positive cell as compared to the normal tissue indicates the presence of breast cancer. The present sequence represents the human Cyr61 protein, which is used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; angiogenesis; connective tissue growth factor-2; CTGF-2; tumour; ischaemia; restenosis; tissue repair; wound healing; congenital defect; cardiovascular disease; atherosclerosis; heart failure; angina; trauma; burns; osteoporosis; periodontal disease; liver failure; tranquillizer; vulnerary; cosmetic plastic surgery; vasotropic; hepatotropic; ulcer; gene therapy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human connective tissue growth factor-2 (CTGF-2).
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47. .51
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                                                                                                                                               CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWYCDEDSIKDSLDDQDDL-- 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention describes a method for the prevention or inhibition of breast cancer cell proliferation. The method comprises administration of a compound that inhibits the interaction of a sex steroid receptor with a sex steroid response element of the Cyr61 (cysteine rich heparinbinding protein) promoter. Cyr61 has cytostatic activity. An antibody (I) which neutralises Cyr61 can be used to prevent or inhibit breast cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Regulation of Cyr61 expression and activity for preventing and inhibiting breast cancer comprises use of a Cyr61 neutralizing antibody, an antisense oligonucleotide and an antibody which.
                              9
KELGFDASEVELTRNNELIAVGKGSSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                                   --LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGOKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRF
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16-MAY-2001; 2001US-0291510P.
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N-PSDB; ABA93127, ABA93130.
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CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDL-- 178 CTCIDGAVGCIPLCPOELSLPNLGCPNPRLVKVTGQCCEEWVCDEDSIKDPMEDQDGLLG 180

121 121 179

ठे a ठ 8 ò 음 ò 용 ઠ 셤 ઠ

NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ 120

MSSRIARALALVVILLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60

236

181 KELGFDASEVELTRNNELIAVGKGSSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ 238 CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF 296

--LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ

TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMNIQSCKCNYN 358

CPHPNEASFRLYSLFNDIHKFRD 379

TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356

CSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF

237 239 297 299 357

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The present invention relates to a method for stimulating angiogenesis in a mammal. The method comprises administering a polynucleotide encoding connective tissue growth factor-2 (CTGP-2) or an active fragment or its connective. The method is useful for stimulating angiogenesis in a mammal preferably human having ischaemia or restenosis or is treated for limb revenuexisation which is leg or arm. The invention is useful for inhibiting tumour growth, where angiogenesis is utilised for enhancing the repair of connective and support tissue, promoting the attachment, fixation and stabilisation of tissue implants and enhancing wound healing, hence is useful for treating cardiovascular disease e.g. atherosclerosis, reperfusion injury such as heart failure, angina, and is also used to differentiate, proliferate and attract calls leading to regeneration of tissues which is utilised to repair colls leading to regeneration of tissues which is utilised to repair upor y age, disease (e.g. osteoporosis, periodontal disease, liver allure), surgery including cosmetic plastic surgery. The present cover proceed is human CTGF-2 gene is useful in gene therapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stimulating angiogenesis in a mammal preferably human having ischemia restenosis or is treated for limb revascularization, by administering connective tissue growth factor-2 polypeptide or polynucleotide.
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92.2%; Score 1938; DB 5; Length 381;
Best Local Similarity 91.4%; Pred. No. 1.9e-142;
Matches 350; Conservative 9; Mismatches 18; Indels
                                                         "Immunogenic epitope"
                                                                                                                                                                                                           "Immunogenic epitope"
                                                                                                                                                                                                                                        "Immunogenic epitope"
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                            "Immunogenic epitope"
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"Immunogenic epitope'
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                                                                      164. .176
/note= "Immunogenic
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                                                                                                                                                                                                                                                                                                                                                                                                                      11-JUL-2001; 2001WO-US021799
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18-MAY-2001; 2001US-0291642P-
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/note= "Im
223. .228
/note= "Im
239. .244
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/note= "Im
279. .296
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/note= "Im
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164. .1
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N-PSDB; AAD29095.
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The present invention relates to the isolation of human connective tissue growth factor 2 (CTGF-2), and the polyuncleotide sequence encoding it. The CTGF-2 polypeptide is useful for enhancing the repair of connective and support tissues, for treating skin disorders such as injuries, acne, UV damage or burns, and wrinkled skin, for promoting attachment, fixation and stabilisation of tissue implants, and as an immunogen to produce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New human connective tissue growth factor 2 polypeptides and polymuleotides useful for enhancing repair of connective and support tissues, and for treating skin disorders, e.g. injuries, acne, UV damage or burns, and wrinkled skin.
                                                                                                                                                                                                        Human, connective tissue growth factor 2, CTGF-2, support tissue, tissue repair, skin disorder; injury, acne; UV damage; burn; wrinkled skin; tissue implant; vulnerary; antiaging; dermatological; antiseborrhoeic.
                                                                                                                                                                               Human connective tissue growth factor 2 (CTGF-2) #1.
CPHANEAAFPFYRLFNDIHKFRD 381
                                                                                       ABU63222 standard; protein; 381 AA
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95US-00459101.
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N-PSDB; ACD26170.
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                                                                                                                                                                                                                                                                                                                       US6534630-B1.
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1 MSSSTFRTLAVAVTLLHTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60

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solated nucleic acids comprising sequences encoding peptides for treating or diagnosing e.g. cancer.

Claim 11; Page 2116-2118; 2352pp; English.

99US-0124270P

12-MAR-1999;

(HUMA-) HUMAN GENOME SCI INC

WPI; 2000-587533/55. N-PSDB; AAC78196.

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Novel isolated

useful

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AAC77607 to AAC78448 encode the human cancer associated proteins given in tissues and calls the genes are expressed in. Example of activities tissues and calls the genes are expressed in. Example of activities include: cytocatic; proliferative; vulnerary; immunomodulator; antidabetic; antiathmatic; antitheumatic; antiathritic; antidabetic; antiathmatic; antitheumatic; antidathritic; antidabetic; antipaterary; immunomodulator; antidabetic; antibaterary; immunomodulator; antidabetic; antipaterary; immunomodulator; antidaterary; antibathritic; antidabetic; antidaterary; immunomodulator; antidate; or polymunolectices and polypeptides can be used for preventing, treating or ameliorating medical conditions and diagnosing pathological conditions. Polymucleotides, polypeptides, antibodies, agonists and antagonists from the present invention may be used to treat immune disorders by activating or inhibiting the proliferation, differentiation or mobilisation of immune cells, to treat disorders of harmatopoietic cells, autoimmune cisculate haemostatic or thromolytic activity, modulate disorders, allege reactions, graft versus host disease and organ rejection, modulate haemostatic or thromolytic activity, modulate inflammation, cancers, cardiovascular disorders, neurological disease and appearance or viral infections. The peptides, mucleotides, antibodies, agonists and antagonists may be also be used in the exemplification of antagonists may be also be used in the exemplification of
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                                                                                                                                                                                                                                                                                                     1 MSSSTFRILAVAVTLIHLIRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
                                                                                                                                                                                                                                                                                                                               1 MSSRIARALALVVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
antibodies. The polynucleotide sequence encoding CTGF-2 may be used as a hybridisation probe for a cDNA library to isolate the full-length cDNA and other cDNAs, which have high sequence similarity to the CTGF-2 gene or similar biological activity. The polynucleotides are also useful for producing polypeptides by recombinant techniques, and in chromosome identification. The present sequence represents human CTGF-2. Note: The present sequence given as SEQ ID No:2 in the sequence listing differs from that given in Fig 1 (ABU63223)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; cancer associated gene; cancer antigen; detection; cancer; diagnosis; cytostatic; proliferative; vulnerary; immunomodulator; antidiabetic; antiasthmatic; antisheumatic; antiantici; antintic; antiinflammatory; antithyroid; antiallergic; antibacterial; cardiant; dermatological; neutroprotective; thrombolytic; coaquiant; noctropic; vasotropic; antipsoriatic; antiangiogenic; gene therapy; inflammation; immune disorder; haematopoietic cell disorder; autoimmune disorder; haematopoietic cell disorder; autoimmune disorder; haemostatic; cardiovascular disease; organ rejection; neurological disease; drug screening.
                                                                                                                                                                                                                                                                                                                                                                                    NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ
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                                                                                                                                                                                                                        Query Match 92.2%; Score 1938; DB 6; Length 381; Best Local Similarity 91.4%; Pred. No. 1.9e-142; Matches 350; Conservative 9; Mismatches 18; Indels
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                                                                                                                                                                                    Sequence 381 AA;
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                                                                                                           1 MSSSTFRTLAVAVTLIHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                           Gaps
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9
Query Match
92.2%; Score 1938; DB 3; Length 455;
Best Local Similarity 91.4%; Pred. No. 2.3e-142;
Matches 350; Conservative 9; Mismatches 18; Indels
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RESULT 11 ABG76937

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention discloses the isolated human polypeptides, and polymucleotides encoding them, that have been designated SECX and NOVX. The polymucleotides can be used for treating, or delaying, the onset of an engiggenic-associated disorder for treating a pathological state in a sugisquence service of the polypeptides and polymucleotides of any one of the 12 presence of, or predafaposition to, a disease associated with altered levels of the polypeptides and polymucleotides of any one of the 12 sequences (SEC1-12), for raising antibodies, for identifying an agent that modulates the expression or activity of the polypeptide, for treating or preventing a NONX-associated disorder (NOV1-8) and as a pharmaceutical composition comprising the polypeptide, polymucleotide or the antibody. The polypeptides and polymucleotides are useful in diagnostic applications where their amounts are assessed, or for the manufacture of a medicament (e.g. gene therapy) for treating or preventing disorders or syndromes such as developmental disorders, immune diseases, sainal transduction pathway disorders, metabolic disorders, neurodegenerative disorders (including Alzheimer's disease and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human SECX/NOVX polypeptide useful for diagnosing, preventing or treating disorders associated with aberrant expression or activity of SECX/NOVX nucleic acids and proteins e.g., diabetes.
                                                                                                                                Human, SEC; NOV; immunosuppressive; hepatotropic; antiinflammatory; angiogenic-associated disorder; dlagnostic; gene therapy; developmental disorder; immune disease; signal transduction pathway disorder; metabolic disorder; signal transduction pathway disorder; metabolic disorder; feeding disorder; obesity; wasting disorder; neurodegenerative disorder; Alzheimer's disease; parkinson's disease; behavioural disorder; allergy; autoimmune disease; retinal disease; cirrhosis; diabetes; infectious disease; retinal disease; cirrhosis; diabetes; human immunodeficiency virus; HIV; cancer; hypotension; multiple sclerosis; urinary retention; osteoporosis; Crohn's disease; ulcer; neurological disorder; anxiety; haemophilia; cirrhosis; immunogen; vaccine.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rastelli L, Herrmann JL, Macdougall JR, Zhong H;
Boldog F, Shimkets RA, Gorman L, Crasta OR, Mysore KK;
Martin GB, Eisen A, Spaderna SK, Verrnet CAM, Bergh C;
Dipippo VA, Zerhusen BD, Peyman JA, Ellerman K, Stone
Alsobrook JP, Lepley DM, Rieger DK, Burgess CE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhong H;
                                                                                                       comprising CYR61, designated SEC1.
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ABG76937 standard; protein; 381
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11-JAN-2001; 2001US-0261014P.
11-JAN-2001; 2001US-0261018P.
11-JAN-2001; 2001US-0261028P.
11-JAN-2001; 2001US-0261029P.
17-AUG-2001; 2001US-0313170P.
10-SEP-2001; 2001US-0318410P.
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                                                                   (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-590675/63.
N-PSDB; ABS59522.
                                                                                                         Human protein,
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Casman SJ, B
Folkerts O,
Spytek KA, D
Grosse WM, A
Edinger S;
                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
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                                                                                                                        They may
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parkinson's disease), behavioural disorders, allergies, asthma, atherosclerosis, cardiomyopathy, angina pectoris, autoimmune diseases, retinal disease, cirrhosis, diabetes, infectious disease (bacterial, fungal, protozoal and viral e.g. human immunodeficiancy virus, HIV), cancer (e.g. prostate cancer), hypertension, hypotension, multiple sclerosis, uninary retention, osteoporosis, (rofni's disease, ulcers, neurological disorders (e.g. anxiety), haemophilia or cirrhosis. They malso be used as immunogens to produce antibodies specific for the invention, and as vaccines. Further, they are useful for screening potential agonist and antagonist compounds. The sequences presented in ABG76937-ABG76956 are the human SEC1-12 and NOVI-8 proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CSKTCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF
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                                                                                                                                                                                                                                                                                                                                                                                                                                    61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAGSEGRPCEYNSRIYQNGESFOPNCKHO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF
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                                                                                                                                                                                                                                                                                                                     Gaps
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                                                                                                                                                                                                                                                                                                                   Indels
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                                                                                                                                                                                                                                                                          91.8%; Score 1930; DB 5;
90.9%; Pred. No. 7.9e-142;
iive 10; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CPHPNEASFRLYSLFNDIHKFRD 379
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2001US-0314356P.
2001US-0325020P.
2001US-0341746P.
2002US-0362158P.
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                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 90.9<sup>3</sup>
Matches 348; Conservative
                                                                                                                                                                                                                                           Sequence 381 AA;
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25-SEP-2001;
12-DEC-2001;
05-MAR-2002;
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Claim 2; Page 112-113; 133pp; English.
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                                                                                                                                     97WO-US004193
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 348; Conserv
                                                                                                                                                                                                                                                                                      modulate e.g. hae
regeneration etc.
                                                                                                                                                                                                                                                N-PSDB; AAT94699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 381 AA;
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                                                              Homo sapiens
                                                                                                                                     14-MAR-1997;
                                                                                                            18-SEP-1997
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                                                                                                                                                         the cancerous state of prostate cells. Also disclosed is a method of assessing whether a patient is afflicted with prostate cancer. The method of the invention involves assessing whether a patient is afflicted with prostate cancer. The method prostate cancer by comparing the level of expression of a marker in a patient sample and the normal level of expression of the marker in a level of expression of the marker in the patient sample and the normal level indicates that the patient is afflicted with prostate cancer. Nucleic acids of the invention are useful for diagnosing or treating prostate cancer, and may be useful in gene therapy. Sequences given in AbB75177-AbB75611 represent marker cNN and proteins. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
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                                                                                                                                                 The invention relates to newly discovered cancer markers associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KELGFDASEVELTRNNELLAVGKGSSLKRIPVFGMEPRIRYNDL--QGQKCIVQTTSWSQ
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                                                                                      nucleic acid molecule, useful for diagnosing or treating prostate
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                          Gorbatcheva
Anderson D;
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                          Endege WO, Gannavarapu M,
nsey AM, Glatt K, Zhao X,
                                                                                                                                                                                                                                                                                                                                                                       91.8%; Score 1930; DB 7;
larity 90.9%; Pred. No. 7.9e-142;
Conservative 10; Mismatches 19;
                                                                                                                         Disclosure; SEQ ID NO 84; 99pp; English
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              Monahan JE, Endese
- s Wonsey AM,
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(MILL-) MILLENNIUM PHARM INC.
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                                       Kamatkar S,
                                                             WPI; 2003-248033/24
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Matches 348; Conserv
                                                                                                                                                                                                                                                                                                                                                 Sequence 381 AA;
                          Schlegel R,
                                       Hoersh S,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This protein sequence comprises human cysteine rich protein 61 (Cyr61), an extracellular matrix signalling molecule. Its amino acid sequence was deduced from a human placental cDNA clone (see AAP94699). Cyr61 bolypeptides can be expressed in transformed or transfected host cells. Cyr61 can be used to modulate haematostasis, induce wound healing in a tissue, promote organ regeneration, improve tissue grafting or promote bone or prothesis implantation (claimed). It can also be used to screen for a modulator of angiogenesis, chondrogenesis, oncogenesis, cell adhesion, cell migration, cell proliferation, expand a population of undifferentiated haematopoietic stem cells in culture and to screen futogen (claimed). Ex vivo methods for using mammalian extracellular matrix signalling molecules to prepare blood products are also provided
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                                    cell migration;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and purified cysteine rich protein 61, Cyr61 - useful tc
e.g. haematostasis, induce wound healing, promote organ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .,
Cysteine rich protein 61; Cyr61; human;
extracellular matrix signalling molecule; cell adhesion; cell i
cell proliferation; angiogenesis; chondrogenesis; oncogenesis;
haematostasis; wound healing; organ regeneration.
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llarity 90.9%; Pred. No. 9.4e-142;
Conservative 10; Mismatches 19;
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Gaps

9

Indels

19;

10; Mismatches

Conservative

348;

381

CPHANEAAFPFYRLFNDIHKFRD

359

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Cysteine-rich protein, Cyr61, extracellular matrix signalling molecule, fibroblast secreted protein, Fisp12; connective tissue growth factor; CTGF, EM; cell adhesion; cell migration, fibroblast cell proliferation, angiogenesis; wound healing; integrin receptor; atherosclerosis; tumour; heart disease; fibrosis; gene therapy; human
                                                                                                                                                 163. .229
/note= "Cysteine free region"
212. .281
                                                          Human cysteine-rich protein (Cyr61).
                                                                                                                                                                   212. .281
/note= "Domain III"
282. .381
                                                                                                                                             Location/Qualifiers
         Ä
                                                                                                                                                                                               /note= "Domain IV"
                                                                                                                                                                                                                                                                                                                 Greenspan JA;
        AAE05921 standard; protein; 381
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15-MAY-2000; 2000US-0204364P.
06-OCT-2000; 2000US-0238705P.
                                                                                                                                                                                                                                               31-JAN-2001; 2001WO-US003267
                                        (first entry)
                                                                                                                                                                                                                                                                                                                                  WPI; 2001-465561/50.
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                                                                                                                             Homo sapiens
                                         24-SEP-2001
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                         AAE05921;
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                                                                                                                                             Key
Region
                                                                                                                                                                     Domain
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AAE05921
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involved in cellular response to growth factors. More particularly the invention is directed to cysteine-rich protein (Cyfel), and Cyfel-related proteins such as thorolast secreted protein (Cyfel), and Cyfel-related proteins such as thorolast secreted protein (Pispl2) and connective tissue growth factor (CTGF) and mucleic acid molecules encoding such secreted proteins. The polypeptides of the invention are members of cysteine-rich secreted protein family. Human Cyfel fragment is usseful in methods for screening modulators of cell adhesion, cell migration, fibroblast cell proliferation, angiogenesis, wound healing and Cyfel-integrin receptor interaction is used for the preparation of a medicament for the treatment of atheroscierosis heart disease, tumour metastasis, fibrosis, tumour growth, disorders associated with inadequate angiogenesis; aberrant granulation tissue development; aberrant fibroblast growth and wounds. Polynucleotides of the invention are useful in gene therapy. The present sequence is human The invention relates to extracellular matrix (ECM) signalling molecules Novel human cysteine-rich protein 61 (Cyr61) fragment useful in methods for screening for modulators of cell adhesion, fibroblast cell proliferation, anglogenesis and cell migration. Claim 30; Page 171-172; 186pp; English. Cyrel protein

Sequence 381 AA;

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Length 381;
 Score 1929; DB 4;
Pred. No. 9.4e-142;
 91.78;
             Best Local Similarity
Query Match
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ဌ 236 298 120 CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF 296 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356 TYAGCLSVKKYRPKYCGSCVDGRCCTPQLTRTVKMRFRCEDGETFSKNVMMIQSCKCNYN 358 61 NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCKHO 120 09 for The present invention describes human small CCN-like growth factor (SCGF). SCGF has vulnerary and osteopathic activities, and can be used gene therapy. The SCGF polypeptides and polynucleotides can be used for treating muscle wasting diseases, and osteoporosis, and to stimulate Novel isolated polynucleotide sequence encoding a human small CCN-like growth factor, useful for treating muscle wasting disease, and 61 NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCQHQ --LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ 1 MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL Human; small CCN-like growth factor; SCGF; vulnerary; osteopathic; gene therapy; muscle wasting disease; osteoporosis; wound healing; tissue regeneration; anglogenesis. HCGF CNN family protein sequence SEQ ID NO:12. CPHPNEASFRLYSLFNDIHKFRD 379 CPHANEAAFPFYRLFNDIHKFRD 381 Disclosure; Fig 2A-D; 33pp; English. Ź ABB09202 standard; protein; 374 95US-00468847. 98US-00053587. 14-MAY-2001; 2001US-00853625 (first entry) Hastings GA, Adams MD; (HAST/) HASTINGS G A. (ADAM/) ADAMS M D. WPI; 2002-382150/41. US2002049304-A1. growth factor, osteoporosis. 06-JUN-1995; 01-APR-1998; 08-JUL-2002 Unidentified 25-APR-2002 297 179 239 299 ABB09202; 357 359 237 Matches RESULT 15 셤 ò 셤 셤 ď à g ð ď ઠે 셤 ò ò ઠ

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wound healing and tissue regeneration, to promote angiogenesis and to stimulate proliferation of vascular smooth muscle and endothelial cell production. The present sequence represents a CNN family protein which given in comparison with the human SCGF in the exemplification of the present invention
                                                                                                                                                                                      Gaps
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                                                                                                                                             86.5%; Score 1819.5; DB 5; Length 374; 88.3%; Pred. No. 3e-133; ive 10; Mismatches 27; Indels 7;
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Best Local Similarity 88,33
Matches 332, Conservative
                                                                                                            Sequence 374 AA;
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Search completed: April 22, 2004, 17:56:32 Job time : 52.8684 secs

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US-09-853-625B-11
                                                                                                                                                                                           April 22, 2004, 17:58:40 ; Search time 38.3987 Seconds (without alignments) 2728.846 Million cell updates/sec
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2103
1 MSSSTFRTLAVAVTLAHLTR......PNEASFRLYSLFNDIHKFRD 379
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1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/1/pubpaa/PG7_NBW_PUB.pep:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                        - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seg length: 200000000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| 1 | Appl | Appli | Appl | Appli | Appl | App1 | Appl | Appl | Appl | Appli | Appli | Appli | Appl | Appl | Appli |
|-------------------------------|-------------------|-----------------|------------------|-----------------|------------------|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|------------------|------------------|-----------------|
| | ٦, | 'n | 45, | 'n | 45, | 9 | 62, | 44, | 44 | 'n | 'n | 'n | 42 | 42 | 'n |
| Description | Sequence 11, | Sequence | Sequence | Sequence | Sequence | Sequence | Sequence | Sequence 44 | Sequence | Sequence | Sequence | Seguence | Sequence | Sequence | Seguence |
| ΩI | JS-09-853-625B-11 | US-10-053-753-2 | US-10-099-322-45 | US-10-182-432-2 | US-10-044-564-45 | US-10-464-368-60 | US-10-464-368-62 | US-10-099-322-44 | US-10-044-564-44 | US-09-901-910-2 | US-10-294-796-2 | US-10-394-015-5 | US-10-099-322-42 | US-10-044-564-42 | US-10-381-644-2 |
| | 6 | 13 | 12 | 12 | 15 | 16 | 16 | 12 | 15 | 10 | 14 | 14 | 15 | 15 | 16 |
| * Query Match Length DB | 379 | 379 | 379 | 379 | 379 | 379 | 379 | 381 | 381 | 381 | 381 | 381 | 381 | 381 | 381 |
| % Query Match | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 98.7 | 92.3 | 92.3 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 | 92.2 |
| Score | 2103 | 2103 | 2103 | 2103 | 2103 | 2103 | 2076 | 1942 | 1942 | 4938 | 1938 | 1938 | 1938 | 1938 | 1938 |
| Result No. | 7 | N | e | 4 | ហ | 9 | 7 | 80 | σ | 10 | 11 | 12 | 13 | 14 | 15 |

| Sequence 61 | 143 | 4. | 4 | 8 | Ñ | 4 | N | 4 | ক | ۵) م | 2 | () () | 13, | 6 | r` | ŭ | Sequence 2, Appli | 'n | 'n | o o | ω | φ | ņ | Sequence 4, Appli | eguence 26 | æŌ | equence 1' | Sequence 46, Appl | Sequence 78, Appl |
|-----------------|-------------|------------|-----------------|------------|----------------|---------------|---------------|-------------|---------------|-----------|------------|-----------|--------|----------|-------------|--------------|-------------------|--------------|---------|----------------|----------------|----------------|--------------|-------------------|----------------|---------------|-----------------|-------------------|-------------------|
| US-10-464-368-6 | -925-301-14 | US-10-099- | US-10-044-564-4 | US-10-205- | US-10-099-322- | US-10-099-322 | US-10-044-564 | US-10-044-5 | US-10-053-753 | US-10-182 | 9-853-625B | US-09-901 | 853-62 | US-10-46 | US-10-245-9 | US-10-464-36 | US-10-390-9 | US-10-101-04 | -853-62 | US-10-053-753- | US-10-245-977- | US-10-182-432- | US-10-464-36 | US-10-101-0 | US-10-011-829- | US-10-053-753 | US-10-060-036-1 | -311 | 0-205-823-7 |
| 31 16 | 95 | - | 31 15 | - | - | Н | Н | - | Н | Н | 74 9 | 75 10 | 75 9 | Н | 47 14 | ~ | - | Н | 48 9 | H | 48 14 | Н | H | Н | H | Н | Н | 349 14 | 49 14 |
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| | | | 92.0 | | | | | 91.8 | | 91.7 | | 86.5 | | | 45.6 | | 45.6 | 45.5 | 45.3 | 45.3 | 45.3 | 45.3 | 45.3 | | ٠. | | | 45.2 | 45.2 |
| 1938 | 1938 | 1935 | 1935 | 1930 | 1930 | 1930 | 1930 | 1930 | 1929 | 1929 | 1819.5 | 1819.5 | 1646.5 | 1624.5 | 960 | 960 | 958 | | 953.5 | | | | | 950 | 950 | 950 | 950 | 950 | 950 |
| 16 | 17 | 18 | 13 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 33 | 40 | 41 | 4 | 43 | 44 | 45 |

ALIGNMENTS

US-09-853-625B-11

Sequence 11, Application US/09853625B

Patent No. US20020049304A1

GENERAL INFORMATION:
PATENT IN THE PASTINGS, Gregg A. and Adams, Mark D.
TITLE OF INVENTION: Human CCN-Like Growth Factor
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
ADDRESSEE: CARELLA, SYRNE, BAIN, GILFILLIAN,
STREET: 6 BECKER FARM ROAD
CITY: ROSELAND
STATE: NEW JERSEY
COUNTRY: USA
ZIP: 07068
COMPUTER: NEW JERSEY
COMPUTER: NEW JERSEY
COMPUTER: NEW JERSEY
COMPUTER: NEW JERSEY
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/853,625B
FILING DATE: JA HWAY-2001
CLASSIFICATION: CURROWNBELIGATION DATA:
APPLICATION NUMBER: US/09/853,587
FILING DATE: CHROWNAPPLICATION NUMBER: 33.073
REFERENCE/DOCKET NUMBER: 325800-442
TELEFAX: 201-994-1744
INFORMATION FOR SEC ID NO: 11:
SEQUENCE CHARACTERISTICA:
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;
OTHER INFORMATION: "Mouse Cyr61 amino acid sequence"
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US-10-053-753-2
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APPLICANT: Microse et al.
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
CURRENT APPLICATION NUMBER: US/10/099,322
CURRENT FILING DATE: 2002-09-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,026
PRIOR APPLICATION NUMBER: 60/261,026
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-08-17
PRIOR PILING DATE: 2001-08-17
PRIOR PILING DATE: 2002-01-11
PRIOR PILING DATE: 2002-01-11
NUMBER OF SEQ ID NOS: 324
SEQ ID NO 45
                                                                                                                                                                                                                                                                 Length 379;
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; Pred. No. 1.8e-166;
0; Mismatches 0;
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US-10-099-322-45
US-10-099-322-45; Application US/10099322
Publication No. US20030215449A1
GENERAL INFORMATION:
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Best Local Similarity 100.0%;
Matches 379; Conservative 0
SEQUENCE CHARACTERISTICS
                         LENGTH: 379 amino
TYPE: amino acid
                                                                TOPOLOGY: linear
MOLECULE TYPE: protein
PEATURE:
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Publication No. US20020150986A1

Publication No. US20020150986A1

Publication No. US20020150986A1

GENERAL INFORMATION:

TITLE OF INVENTION: Extracellular Matrix Signalling Molecules

NUMBER OF SEQUENCES: 17

CORRESPONDENCE MATSHAll, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive

CITY: Chicago
STATE: 111inois

COUNTY: United States of America

ZIP: 6060-6402

COMPUTER: READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PRACHITIN Release #1.0, Version #1.30

CURRENT APPLICATION NUMBER: US/10/553,753

FLING DATE: 22-Jan-2002

CLASSIFICATION NUMBER: 36,107

REPERENCE/DOCKET NUMBER: 36,107

TELEPRONE: 312/44-6300

TELEPRONE: 312/44-6300

TELEPRONE: 312/44-64300
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100.0%; Score 2103; DB 9; Length 379;
Best Local Similarity 100.0%; Pred. No. 1.8e-166;
Matches 379; Conservative 0; Mismatches 0; Indels 0.
  TYPE: AMINO ACID
STRANDENESS: -CUARNOWN>
TOPOLOGY: LINEAR
MOLECULE TYPE: PROTEIN
SEQUENCE DESCRIPTION: SEQ ID NO: 11:
US-09-853-6528-11
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INFORMATION FOR SEQ ID NO: 2:
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US-10-1242-2
is Sequence 2, Application US/10182432
is Sequence 2. Application US/10182432
is Dublication No. US20040002124A1
is GENERAL INFORMATION:
is APPLICANT: LAU, Lester F., YEUNG, Cho-Yau, and GREENSPAN, Jeffrey A., TITLE OF INVENTION: CYR61 COMPOSITIONS AND METHODS
is FILE REFREENCE: 214448/00029
is CURRENT APPLICATION NUMBER: US/10/182,432
is CURRENT FILING DATE: 2002-07-26
is NUMBER OF SEQ ID NOS: 38
is SOFTWARE: Patentin Ver. 2.0
is SEQ ID NO. 2
is LEWARTH: 379
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                                                                                     Query Match 100.0%; Score 2103; DB 15; Length 379; Best Local Similarity 100.0%; Pred. No. 1.8e-166; Matches 379; Conservative 0; Mismatches 0; Indels 0;
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; LENGTH: 379
; TYPE: PRT
; ORGANISM: Mus musculus
US-10-099-322-45
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; ORGANISM: Mus musculus
US-10-182-432-2
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PRIOR APPLICATION NUMBER: 60/388,970
PRIOR FILING DATE: 2002-06-14
NUMBER OF SEQ ID NOS: 140
SOFTWARE: Patentin version 3.2
SEQ ID NO 62
LENTH: 379
TYPE: PRT
TYPE: PRT
US-10-464-368-62
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Sequence 60, Application US/10464368
Publication No. US20040023356A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Ellies, Debra
APPLICANT: Ellies, Debra
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR REGULATING BONE DEPOSITION
FILLE REPERENCE: 40716-IP-017
CURRENT APPLICATION NUMBER: US/10/464,368
CURRENT PILING DATE: 2003-06-16
PRIOR APPLICATION NUMBER: 60/388,970
PRIOR PRILING DATE: 2002-06-14
NUMBER OF SEQ ID NOS: 140
SOFTWARE: Patentin version 3.2
SOFTWARE: Patentin version 3.2
SEQ ID NO 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 62, Application US/10464368
Publication No. US20040023356A1
GENERAL INFORMATION
APPLICANT: Krunlauf, Robb
APPLICANT: Ellies, Debra
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR REGULATING BONE DEPOSITION
FILE REFERENCE: 40716-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-1P-0116-
    CSSVKXYRPKYCGSCVDGRCCTPLQTRTVGARRCEDGEMPSKNVMIQSCKCNYNCPHP 360
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100.0%; Score 2103; DB 16; Length 379;

Best Local Similarity 100.0%; Pred. No. 1.8e-166;

Matches 379; Conservative 0; Mismatches 0; Indels 0;
                                                                                                                    361 NEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                             361 NEASFRLYSLFNDIHKFRD 379
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ORGANISM: MOUSE
US-10-464-368-60
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GENERAL INFORMATION:

TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 2.402-340CIP
CURRENT APPLICATION NUMBER: 05/261,014
PRIOR PELLING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR APPLICATION NUMBER: 60/261,013
PRIOR APPLICATION NUMBER: 60/261,026
PRIOR FILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR FILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
       Length 379;
                                                                      Indels
Score 2076; DB 16;
Pred. No. 3.2e-164;
4; Mismatches 3;
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, Sequence 44, Application US/10099322
; Publication No. US20030215449A1
; GENERAL INFORMATION:
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Query Match
Best Local Similarity 98.2%;
Matches 372; Conservative
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                                              1 MSSRIARALALWYTLHITTRIALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKOL
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| Publication No. US20030012768A1
| GENERAL INFORMATION:
| APPLICANT: Li, Haddong
| APPLICANT: Calenda Valerie
| TITLE OF INVENTION: Connective Tissue Growth Factor-2
| TITLE OF INVENTION Connective Tissue Growth Factor-2
| TITLE OF INVENTION CONNECTIVE TISSUE GREEN THE PRICATION NUMBER: US/09/901,910
| CURRENT APPLICATION NUMBER: 09/348,815
| PRIOR APPLICATION NUMBER: 09/348,815
| PRIOR FILING DATE: 1999-07-08
| PRIOR PEPLICATION NUMBER: PCT/US94/07736
| PRIOR PEPLICATION NUMBER: PCT/US94/07736
| PRIOR PELING DATE: 1994-07-12
| PRIOR PELING DATE: 2000-07-11
| PRIOR PLING DATE: 2001-05-18
| NUMBER OF SEQ ID NOS: 8
| SOFTWARE: PATENTIN VERSION 3.0
| SEG ID NOS: 8
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TYPE: PRT
ORGANISM: homo sapiens
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                                                                                                                                                           Gaps
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US-10-044-564-44

Sequence 44, Application US/10044564

Sequence 44, Application US/10044564

Publication No. US20040018196A1

GENERAL INFORMATION:

TITLE OF INVENTION: Proceins and Nucleic Acids Encoding Same FILE REFERENCE: 21402-240

CUTRENT PELING DATE: 2002-09-09

PRIOR APPLICATION NUMBER: 60/261,014

PRIOR APPLICATION NUMBER: 60/261,018

PRIOR APPLICATION NUMBER: 60/261,018

PRIOR APPLICATION NUMBER: 60/261,018

PRIOR PILING DATE: 2001-01-11

                                                                                                      Length 381;
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                                                                                               Query Match 92.3%; Score 1942; DB 15; Best Local Similarity 91.6%; Pred. No. 4.4e-153; Matches 351; Conservative 9; Mismatches 17;
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; ORGANISM: Homo sapiens
US-10-099-322-44
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ORGANISM: Homo sapiens
US-10-044-564-44
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TYPE: PRT
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DATE: 1998-06-05
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; Sequence 42, Application US/10099322
; Publication No. US20030215449A1
; GENERAL INFORMATION:
; APPLICANT: Macses et al.
; TITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same FILE REPERENCE: 21402-240CIP
; CURRENT FILING DATE: 2002-09-11
; PRIOR APPLICATION NUMBER: 60/261,014
; PRIOR APPLICATION NUMBER: 60/261,014
; PRIOR APPLICATION NUMBER: 60/261,018
; PRIOR PILING DATE: 2001-01-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 381;
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                                                                                                                                                                                             APPLICANT: YOUNG, Paul
APPLICANT: Ruben, Steven M.
TITLE OF INVENTION: Connective Tissue Growth Factor-4
FILE REFERENCE: PP467
CURRENT APPLICATION NUMBER: US/10/394,015
CURRENT FILING DATE: 2003-03-24
PRIOR APPLICATION NUMBER: US/09/325,019
PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 60/7
PRIOR PILING DATE: EARLIER FILING DATE: 1998-06-05
PRIOR FILING DATE: EARLIER FILING DATE: 1998-06-05
NUMBER OF SEQ ID NOS: 27
SOFTWARE: PATENTIN VET. 2.0
SSQ ID NO 5.
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Pred. No. 9.5e-153;
9; Mismatches 18;
     359 CPHANEAAFPFYRLFNDIHKFRD 381
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                                                                                                                          Sequence 5, Application US/10394015
Publication No. US20030180891A1
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Best Local Similarity 91,4%;
Matches 350; Conservative
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ORGANISM: Homo sapiens
US-10-394-015-5
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                                               --LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ
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TITLE OF INVENTION: Connective Tissue Growth Factor-2
FILE REFERENCE: PF126P102
CURRENT APPLICATION NUMBER: US/10/294,796
CURRENT APPLICATION NUMBER: US 09/348,815
FRIOR APPLICATION NUMBER: US 09/348,815
FRIOR PILLING DATE: 1999-07-08
FRIOR APPLICATION NUMBER: US 08/459,101
FRIOR PILLING DATE: 1995-06-02
FRIOR FILING DATE: 1994-07-12
NUMBER OF SEQ 1D NOS: 6
SOFTWARE: Patentin version 3.1
SEQ ID NO. 2
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Best Local Similarity 91.4%; Pred. No. 9.5e-153;
Matches 350; Conservative 9; Mismatches 18;
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181 KELGFDASEVELTRNNELIAVGKGSSLKRLPVFGMEPRILYNPL--QGQKCIVQTTSWSQ 238
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1. Sequence 2, Application US/10381644

2. Publication No. US20040023910A1

3. GENERAL INFORMATION:

3. APPLICANT: Anang, Zhiming

3. APPLICANT: Zhang, Zhiming

3. APPLICANT: Zhang, Zhiming

3. APPLICANT: Zhang, Zhiming

3. APPLICANT: Zhang, Zhiming

4. APPLICANT: Zhang, Zhiming

5. TITLE OF INVENTION: Use of Cyr61 in the treatment and

7. ITLE OF INVENTION: diagnosis of human uterine leiomyomas

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Pred. No. 9.5e-153;
9; Mismatches 18;
   PRIOR APPLICATION NUMBER: 60/261,029
PRIOR PILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/313,170
PRIOR PILING DATE: 2001-08-17
NUMBER OF SEQ ID NOS: 306
SOFTWARE: Patentin Ver. 2.1
SOFTWARE: Patentin Ver. 2.1
TYPE: RT
TYPE: RT
CREANISM: HOMO sapiens
US-10-044-564-42
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Matches 350; Conservative
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ITLE OF INVENTION: Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-240
CURRENT APPLICATION NUMBER: US/10/044,564
CURRENT FILING DATE: 2002-09-09
FIROR PAPLICATION NUMBER: 60/261,014
PRIOR FILING DATE: 2001-01-11
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR APPLICATION NUMBER: 60/261,018
PRIOR PILING DATE: 2001-01-11
PRIOR FILING DATE: 2001-01-11
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Best Local Similarity 91.4%; Pred. No. 9.5e-153;
Matches 350; Conservative 9; Mismatches 18;
PRIOR APPLICATION NUMBER: 60/318,410
PRIOR FILING DATE: 2010-09-10
PRIOR PILING DATE: 2001-09-10
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR FILING DATE: 2001-01-11
PRIOR FILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-11
PRIOR PILING DATE: 2001-01-17
PRIOR PILING DATE: 2001-01-17
PRIOR PILING DATE: 2001-01-17
PRIOR PILING DATE: 2001-08-17
PRIOR PILING DATE: 2001-08-17
PRIOR PILING DATE: 2002-01-11
NUMBER OF SEQ ID NOS: 324
SOFTWARE: PATENTIN VET: 2.1
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Publication No. US20040018196A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Homo sapiens
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US-10-044-564-42
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179 -- LGLDASEVELTRINELIAIGKGSSLKRIPVFGTEPRVLFNPLHAHGOKCIVQTTSWSQ 236
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                              1 MSSRIARALALVVTLIHITRIALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL 60
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Search completed: April 22, 2004, 18:08:16 Job time : 39.3987 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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April 22, 2004, 17:53:39 ; Search time 16.4566 Seconds (without alignments) 2215.320 Million cell updates/sec - protein search, using sw model OM protein Run on:

US-09-495-448A-2 2103 1 MSSSTFRTLAVAVTLLHLTR......PNEASFRLYSLFNDIHKFRD 379 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283366 seqs, 96191526 residues Searched:

283366 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 20000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR 78:*
1: Dirl:*
2: Dir2:*
3: Dir3:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | Description | gene CYR61 protein | 10 prot | beta IG-M2 protein | connective tissue | NOV protein - chic | gene novH protein | het | mucin - rat | - | MEGF6 protein - ra | | cine- | ~ | mucin MUC5B, trach | Balbiani ring 3 pr | mucin-like peptide | hypothetical prote | protein F40E10.4 [| slit-1 protein hom | = | notch4 - mouse | ical r | cysteine-rich prot | 8 | laminin alpha-2 ch | й | plaque | ole vitellog | mucin 2 precursor, |
|-----------|----------------|--------------------|---------|--------------------|-------------------|--------------------|-------------------|--------|-------------|-------|--------------------|--------|--------|--------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------|----------------|--------|--------------------|------|--------------------|-------|--------|--------------|--------------------|
| SUMMARIES | ID | ı vo | A41428 | ~ | A40551 | 8 | 0 | T26972 | JC5598 | 30 | T13954 | T27283 | T42626 | A57534 | A53767 | S08167 | A42112 | T22025 | D89711 | T42218 | A53612 | 8 | 168 | 550 | 22 | 538 | 398 | 561 | 183 | A43932 |
| | DB | ! | | | | | | | | | | | | | | | | ~ | | | | | | | | | | | | |
| | Length | 379 | 375 | 348 | 349 | 351 | 357 | 1111 | 1034 | 13288 | 1574 | 1620 | 1025 | 1042 | 1056 | 1700 | 837 | 601 | 601 | 1531 | 1170 | 1964 | 1101 | 251 | 5376 | 3106 | 1178 | 473 | 1847 | 3020 |
| æ | Query Match | ١., | œ, | 45.5 | ď. | ò | σ. | | • | • | • | 7,4 | 7.4 | • | 7.2 | • | 6.9 | 6.9 | | ٠ | | | ٠ | 6.7 | ٠ | • | 9.9 | | • | ٠ |
| | Score | . 0 | • | 57. | ഗ | φ | • | 171 | 9 | ۲. | 156.5 | 56. | 156 | • | 15 | • | 4 | | 145 | 4 | • | 143 | • | 141 | 4. | 4 | 139.5 | m | 38. | Ġ |
| | Result No. | | 7 | ť | 4 | 2 | 9 | 7 | 80 | o | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

| insulin-like growt MEGF5 protein - ra | hypothetical prote probable laminin a | hypothetical prote insulin-like growt | spore coat protein notch protein homo | fibrillin 1 precur jaqqed protein pre | notch protein homo hypothetical prote | gene shuttle craft hymothetical prote | |
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| 148601 T13953 | 723433 737316 | T27684 JN0508 | S11676 A40043 | A47221 A56136 | S18188 T18649 | T13938 | T09229 T10756 |
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| 305 | 3672 | 305 | 424 555 555 | 3002 | 2531 | 1106 | 1292 810 |
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| 135.5 | 135 | 134 133.5 | 133.5 | 133.5 | 133 | 132.5 | 131.5 |
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ALIGNMENTS

RESULT 1

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A40578

A40578

A40578

A40578

A40578

A40578

A40578: Mouse mouse)

C;Species: Mus musculus (house mouse)

C;Species: Mus musculus (house mouse)

C;Date: 06-Mar-1992 #text_change 01-Dec-2000

C;Accession: A40578; A53228

R;Brunner, A.; Chinn, J.; Neubauer, M.; Purchio, A.F.

DNA, Cell Biol. 10, 293-3300, 1991

A;Tille: Identification of a gene family regulated by transforming growth factor-beta.

A;Reference number: A40578; MUID:91229699; PMID:2029337
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                                                                                                                        CSSVKXXRPKYCGSCVDGRCCTPLQTRTVKNRPRCEDGEMFSKNVMMIQSCKCNYNCPHP 360
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CBF-10 protein precursor - chicken
CBF-10 protein precursor - chicken
CBF-10 protein precursor - chicken
CSF-10 protein gallus (chicken)
C;Species: Gallus gallus (chicken)
C;Gaccesion: A41428
CSF-10 bl.; Levy, D.B.; Yannoni, Y.; Erikson, R.L.
Proc. Natl. Acad. Sci. U.S.A. 86, 1178-1182, 1989
A;Title: Identification of a phorbol ester-repressible v-src-inducible gene.
A;Reference number: A41428
A;Retus: preliminary
A;Accession: A41428
A;Actus: preliminary
A;Accession: A41428
A;Accession: A1428
A;Accession: A1428
A;Accession: A1428
A;Accession: CSF-10
A;Accession: A1428
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EVELTRINNELIAIGKGSSLKRLPVFGTEP--RVLFNPLHAHGQKCIVQTTSWSQCSKSCG
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                                                                                                CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKARFRCEDGEMFSKAVAMIQSCKCNYNCPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 AVAVTLIHLTRLAL-STCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQ
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78.3%; Score 1646.5;
Best Local Similarity 80.1%; Pred. No. 3.1e
Matches 302; Conservative 22; Mismatches
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CiSpecies: Homo sapiens (man)
CiSpecies: Homo sapiens (man)
CiSpecies: Homo sapiens (man)
CiSpecies: Homo sapiens (man)
CiSpecies: Tr-dul-1992 #sequence_revision 17-Jul-1992 #text_change 21-Jul-2000
CiAccession: A40551; 844205
R;Bradham, D.M.; Igarashi, A.; Potter, R.L.; Grotendorst, G.R.
A;Title: Connective tissue growth factor: a cysteine-rich mitogen secreted by human viAfaccession: A40551; MUID:91373462; PMID:1654338
A;Accession: A40551; MUID:91373462; PMID:1654338
A;Molecule type: mRNA
A;Residues: 1-349 - CBRA
A;Residues: 1-340551; MUID:91373462; PMID:1654338
A;Residues: 1-349 - CBRA
A;Residues: 1-340551; MUID:91373462; PMID:1654338
A;Residues: 1-340551; PMID:1654338
A;Res
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A;Status: preliminary
A;Residues: 1-348 acm,
A;Residues: 1-348 acm,
A;Cross-references: GB:M80263; NID:g201945; PIDN:AAA73135.1; PID:g201946
A;Cross-references: GB:M80263; NID:g201945; PIDN:AAA73135.1; PID:g201946
B;Ryseck, R.P.; Macdonald-Bravo, H.; Mattei, M.G.; Bravo, R.
Cell Growth Differ: 2, 225-233, 1991
A;Title: Structure, mapping, and expression of fisp-12, a growth factor-induca; Reference number: A53228
A;Reference number: A53228
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-160, K',162-348 acms
A;Cross-references: GB:M70641; NID:g193313; PIDN:AAA37627.1; PID:g193314
A;Genetics:
A;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118 XHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCBEWVCDFDSIKDSLDDQDD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        178 LIGIDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGOKCIVQTTSWSO
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A; Accession: S44205
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-349 < COEM>
A; Cross-references: EMBL:X78947; NID:g474933; PID:g474934
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45.5%; Score 957.5; DB 2;
Best Local Similarity 46.8%; Pred. No. 1.5e-60;
Matches 178; Conservative 60; Mismatches 103;
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Cisperiors: Homo sapiens (man)
Cisperiors: Homo sapiens (man)
Cisperiors: Homo sapiens (man)
Cisperiors: Homo sapiens (man)
Cisperiors: 17-May-1996 #sequence_revision 17-May-1996 #text_change 05-Nov-1999
Cisperiors: 138069
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211 ACSKSCGMGFSTRVTNRNQQCEMVKQTRLCMMRPCENBEPSD-KKGKKC1QTKKSMKAVR 269
                                                                                                                                         CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 CLVCARQRGESCSDLEPCDESSGLYCDRSADPSNQTGICTA-VEGDNCVFDGVIYRSGEK 122
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123 FQPSCKFQCTCRDGQIGCVPRCQLDVLLPEPNCPAPRKVEVPGECCEKWICGPDE-EDSL 181
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C;Species: Caenorhabditis elegans
C;Date: 12-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 17-Mar-2000
C;Accession: T26972
R;Harris, B.
                                                                                                        FTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMI1QSCKCNY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 MSSSTF----RILAVAVTLIHLTRLALST--CPAAC--HCPLEAPKCAPGVGLVRDGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:X78351; NID:g587422; PIDN:CAA55146.1; PID:g825696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       173 DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182 GG----LTLAAYRPEATLGVEV----SDSSV------------NCIEOTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 357;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Introns: 28/3; 104/1; 188/1; 259/3
C; Superfamily: thrombospondin type 1 repeat homology
F; 203-250/Domain: thrombospondin type 1 repeat homology <THR1>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 39.9%; Score 839.5; DB 2; Best Local Similarity 43.8%; Pred. No. 3.3e-52; Matches 163; Conservative 52; Mismatches 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    352 KCNYNCPHPNEA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          332 TCHTNCPKNNEA 343
                                                                                                                                                                                                                                      356 NCPHPNEASFR 366
                                                                                                                                                                                                                                                                                                       NCPOSNNAFFQ 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene novH protein - human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Species: Gallus gallus (chicken)
C; Species: Gallus gallus (chicken)
C; Species: Gallus gallus (chicken)
C; Date: 19-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 21-Jul-2000
C; Date: 19-Feb-1994 #sequence_revision 10-Nov-1995 #text_change 21-Jul-2000
C; Accession: S20078
Nol. Cell. Biol. 12, 10-21, 1992
Mol. Cell. Biol. Mulb: 9210/157; PMID: 1309586
A; Residues: Preliminary
A; Molecule type: mRNA
A; Residues: 1-351 < JOL>
A; Molecule type: MRNA
A; Residues: 1-351 < JOL>
A; Molecule type: MRNA
A; Residues: 1-351 < JOL>
A; Molecule type: MRNA
A; Residues: 1-351 < JOL>
A; Molecule type: MRNA
A; Residues: 1-351 < JOL>
A; Molecule type: MRNA
A; Molecu
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                                                                                                                                                                                                                                                                                                    CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES 112
                                                                                                                                                                                                                                                                                                                                                                                                                                     FOPNCKHOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----TVVGPALAAYRLEDTFGPDPTMI-----RANCLVQT 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             232 TSWSQCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSP 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKAVVMMIQSC 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCD-EDSI-----KDSLDDQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DDLLGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWS 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYONGESFOPNCKHOC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVR 295
                                                                                                                                                                                                                                   99
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 LPVLLLLLLLLRPCEVSGREAACPRPCGGRCPAEPPRCAPGVPAVLDGCGCCLVCARQRG 68
                                                                                                                                                                                                             DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQT
                                                                                                                                                              1 MSSSTFRTLAVAVTLLHLTRLALSTCPAA-----CHCPLE-APKCAPGVGLVRDGCGC
                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                    48;
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                                    Length 349;
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40.9%; Score 861; DB 2; Length 351
Best Local Similarity 44.5%; Pred. No. 9.9e-54;
Matches 165; Conservative 44; Mismatches 110; Indels
                                                                                                 97; Indels
                                       5
                            Query Match
45.2%; Score 950; DB 2;
Best Local Similarity 45.7%; Pred. No. 5e-60;
Matches 176; Conservative 64; Mismatches 9
                                                                                                 64; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   324 ACHYNCPGDNDIFESLYYRKWYGDM 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352 KCNYNCPHPNEASFRLY--SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  : ||:| |:
188 EATLGIDVSD----
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                                                                                                                                                                                                                                                                                                53
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919 115 919

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A; Molecule type: mRNA
A; Residues: 1-1328 cECC.>
A; Cross-references: BMB1: AF005273; NID: 92581863; PIDN: AAC62527.1; PID: 92581864
A; Cross-references: BMB1: AF005273; NID: 92581863; PIDN: AAC62527.1; PID: 92581864
B; ECkhardt, A.B.; Timpte, C.S.; Abernethy, J.L.; Zhao, Y.; Hill, R.L.
A; BAOL Chem. 266, 9678-9686, 1991
A; Title: Porcine submaxillary mucin contains a cystine-rich, carboxyl-terminal domain i
A; Reference number: A40009; MUID: 91236743; PMID: 2033060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptide chai
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// Residues: 12139-12167, TT, 12169-12641 <TIM>
// Cross references: GB MA21174, GB:03512; NID:9164321; PIDN:AAA30990.1; PID:9552360

// Residuental source: submaxillary gland
// Reckhardt, A.B.; Timpte, C.S.; Abernethy, J.L.; Toumadje, A.; Johnson Jr., W.C.; Hill,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GOCCEEWVCDEDSIK 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ESCLCEVSSNAFSDVFVVNCETELCNTQCPKGFEYQTTPGHCCGQCVPKTCPFKNSNNST 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCQ-DCICKEGILICQEKLCPQPI-----CPEPGFVPVSIALEAGQCCSQFSC---VC 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DSLDDQDDLLGLDASEVELTRNNELIAIGKG-SSLKRLPVFGTEPRVLFNP----LHAHG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --NDNPEC 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                842 SLYKPGEFWPEPGNPCVTHKCEKFODVLTVVTVKIECPKINCPODWAQLREDGCCYDCLV 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---RCCTP 323
                                                                                                                                                                                                                                                                                                                                                    CHM-LDLEVVCSGLELYASLCAAQGVCIPWRSHTNNTCPFTCPENQVYQPCGPSNPHYCY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RNDDISLSLALOKAGPKSEGCFCPDDMTLFSSNDSICVPSCQWCLGPHGEPVEPGHTISI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-Jun-2000
                                                                                                                                                                                                                                                                     30 CHCPLEAPKCAPGVGLVRDGCGCCKVC---AKQLNEDCSKT-----QPCDHTKGLECN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80 FGASSTALKGICRA--QSEGRPCEYNSRIYQ-------NGESFQP----
                                                                                   , Score 166; DB 2; Length 1034;
, Pred. No. 0.00035;
47; Mismatches 170; Indels 146; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: mRNA
A;Residues: 1219-12167,'T',12169-13288 <BC3>
A;Cross-references: GB:M61883; NID:9454837; PIDN:AAA30998.1; PIDS:g164374
A;Cross-references: GB:M61883; NID:9454837; PIDN:AAA30998.1; PIDS:g164374
R;Timpte, C.S.; Eckhardt, A.E.; Abernethy, J.L.; Hill, R.L.
A; Title: Corcine submaxillary gland apomucin contains tandemly repeated,
A;Title: Porcine submaxillary gland apomucin contains tandemly repeated,
A;Reference number: A28528; MUID:88087170; PMID:2826455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mucin, submaxillary - pig

Mixlernate names: apomucin

Cispecies as scrofd admestica (domestic pig)

Cispecies: 24-Mar-1999 #sequence_revision 24-Mar-1999 #text_change 02-Jun-2

Cispecies: 27-Mar-1999 #sequence and structural polymorphism of the Islange o
    F;762-830/Domain: von Willebrand factor type C repeat homology <VWC>
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                                                                                        7.9%;
ilarity 21.4%;
Conservative 4'
                                                                                        Query Match
Best Local Similarity
Matches 99; Conserv
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A; Status: nucleic acid sequence not shown
A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 1-1034 «INA
A; Residues: 1-1034 «INA
A; Cross-references: GB: U83139; NID: g2315984; PIDN: AAC53312.1; PID: g2315985
A; Cross-references: GB: U83139; NID: g2315984; PIDN: AAC53312.1; PID: g2315985
C; Comment: This protein is a high molecular weight glycoprotein which is a major component estinal tract and reproductive tract.
                                                                                                                                                                                                                                                                                                                                                                                A,Gene.: CESP:Y47H9C.4
A,Map position: 1
A;Introns: 50/2; 84/2; 150/1; 238/3; 342/3; 797/1; 851/1; 947/2; 1017/1; 1083/1
C;Superfamily: unassigned ankyrin repeat proteins; ankyrin repeat homology; EGF homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tissue distri
                                                                                                                         A, Status: preliminary; translated from GB/EMBL/DDBJ
A, Molecule type: DNA
A, Residues: 1-1111 < WIL>
A, Cross-references: EMBL: AL032657; PIDN: CAA21739.1; GSPDB: GN00019; CESP: Y47H9C.4
A, Experimental Bource: clone Y47H9C
C, Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                439
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -NPRLVKVSGQCCEEWVCDEDSIXDSLDDQDDLLGLDASEVELTRNNE 193
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QQV-----C-SCADGHGCDPTTGECICEPGYHGKTCSEKCPDGKYGYGCALDCPKCAS 737
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Date: 23-Sep-1997 #sequence_revision 23-Sep-1997 #text_change 05-Nov-1999
Accession: UC5598
Inatomi, T.; Tisdale, A.S.; Zhan, Q.; Spurr-Michaud, S.; Gipson, I.K.
Inatomi, T.; Tisdale, A.S.; Zhan, Q.; Spurr-Michaud, S.; Gipson, I.K.
Inatomi, T.; Tisdale, A.S.; Zhan, Q.; Spurr-Michaud, S.; Gipson, I.K.
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Inatomi, T.; Tisdale, A.S.; Zhan, Q.; Spurr-Michaud, S.; Gipson, I.K.
Inatomin G. Tisdale, A.S.; Zhan, Q.; Spurr-Michaud, S.; Gipson, I.K.
Inatomin G. Tisdale, A.S.; Zhan, Q.; Spurr-Michaud, S.; Gipson, I.K.
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Inatomin G. Tisdale, A.S.; Zhan, G.; Spurr-Michaud, S.; Gipson, I.K.
Inatomin G. Tisdale, A.S.; Zhan, G.; Spurr-Michaud, S.; Gipson, I.K.
Inatomin G. Tisdale, A.S.; Zhan, G.; Spurr-Michaud, S.; Gipson, I.K.
Inatomin G. Tisdale, A.S.; Zhan, G.; Spurr-Michaud, S.; Spurr-Michaud, S.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CSKTCTCVRENTLMCAPNTGFCRCKPGFYGDNCELACSKDSYGPNCEKQAMCDWNHASEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
8.1%; Score 171; DB 2; Length 1111;
Best Local Similarity 20.1%; Pred. No. 0.00017;
Matches 86; Conservative 32; Mismatches 156; Indels 154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ---OPGFFGSDCS
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C;Superfamily: von Willebrand factor type C repeat homology
F;45-149/Domain: cysteine-rich <CYS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            submitted to the EMBL Data Library, October 1998 A;Reference number: 220293 A;Accession: T26972
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| | PRESULT 11 Typothetical protein Y64G10A.f - Caenorhabditis elegans Cybecteis Caenorhabditis elegans Cybecteis Caenorhabditis elegans Cybecteis Caenorhabditis elegans Cybete 15-Cot-1999 #text_change 15-Oct-1999 CyAccession: Typ238 RyAinscough, R. Symbolitical types in EMBL Data Library, September 1999 RyAinscough, R. AyAccession: Typ238 AyActession: Typ238 AyActession: Typ238 AyActession: Typ2189 AyCtession: Typ2189 AyCtessi |
|--|--|
| J. Biol. Chem. 262, 11339-11344, 1987 A; Fitte: Structural properties of porcine submaxillary gland apomucin. A; Recence number: A92606; MUID:87280230; PMID:3611111 A; Accession: B29786 A; Molecule type: Drotein C; Keywords: tandem repeat C; Keywords: tandem repeat A; Drotein No. 0.013; Matches 93; Conservative 46; Mismatches 148; Indels 175; Gaps 22; C; Keywords: tandem repeat A; Mismatches 148; Indels 175; Gaps 22; C; Keywords: tandem repeat A; Mismatches 148; Indels 175; Gaps 22; C; Keywords: tandem repeat A; Mismatches 148; Indels 175; Gaps 22; C; Keywords: tandem repeat A; Mismatches 148; Indels 175; Gaps 22; C; Keywords: tandem repeat A; Mismatches 175; Gaps 22; C; Keywords: tandem repeat A; Mismatches 175; Gaps 22; C; Keywords: tandem repeat A; Molecule type: Drotein No. 0.013; Best Local Similarity 20.14; Pred; Mismatches 148; Indels 175; Gaps 22; C; Keywords: tandem repeat A; Molecule type: Drotein No. 0.013; Pred; Mismatches 175; DB 2; Length 13288; A; Conservative 46; Mismatches 175; DB 2; Length 13288; Best Local Similarity 20.14; Pred; Mismatches 175; DB 2; Length 13288; A; Matches 93; Conservative 46; Mismatches 175; DB 2; Length 13288; A; Matches 93; Conservative 46; Mismatches 175; DB 2; Length 13288; A; Matches 93; Conservative 46; Mismatches 175; DB 2; Length 13288; A; Matches 93; Conservative 46; Mismatches 175; DB 2; Length 13288; A; Mismatches 93; Conservative 46; Mismatches 175; DB 2; Length 13288; A; Mismatches 93; Conservative 46; Mismatches 175; Length 13288; A; Mismatches 93; Conservative 46; Mismatches 1888 A; Mismatches 93; C | Oy 221 HAHGGKCIVOTTSWBQCSKSCGTGISTRYTNDNDE 255 Db 1052 RANGEVCCLCCANNOBLKDDFTRYSSVAVGELEFGNSWFTSGCSPT7058FCDSNP 1111 OY 256 CRLVKETRICEVRPCGQPVKSSLKKKKKCSSTKKCSPEPRFTYAG-CS 302 1112 CK-AMAVRACEIRNDSTFRDCHNKUPBSAYDACIEBACACDMEGK |

| | RESULT 13 A57534 mucin 5AC (clone L31) - human (fragment) C;Species: Homo sapiens (man) C;Date: 08-Feb-1996 #sequence_revision 08-Feb-1996 #text_change 20-Apr-2000 C;Accesion: A57534 R;Lesuffleur, T.; Roche, F.; Hill, A.S.; Lacasa, M.; Fox, M.; Swallow, D.M.; Zweibaum, |
|--|--|
| RESULT 12 T42626 Secreted leucine-rich repeat-containing protein SLIT2 - mouse (fragment) NyAlternate names : neurogenic extracellular slit protein C;Alternate names: neurogenic extracellular slit protein C;Species: Mis musculus (house mouse) C;Date: 11-Jan-2000 #sequence_revision 11-Jan-2000 #text_change 16-Aug-2002 C;Accession: T42626 R;Holmes, G.P.; Negue, K.; Burridge, L.; Raman, S.; Algar, E.; Yamada, T.; Little, M.H. Mach. Dev. 79, 57-72, 1998 A;Title: Distinct but overlapping expression patterns of two vertebrate slit homologs im A;Accession: T43626 A;Status; preliminary; translated from GB/EMBL/DDBJ | J. Biol. Chem. 270, 13665-13673, 1995 Ajritle: Characterization of a mucin cDNA clone isolated from HT-29 mucus-secreting cell Ajritle: Characterization of a mucin cDNA clone isolated from HT-29 mucus-secreting cell Ajracession: A57534; MuID:95293957; PMID:7775418 Ajraces: Preliminary Ajracus: preliminary Ajmolecule type: mRNA Ajracis type: MNCSAC Ajraces: GDB:454136; OMIM:158373 Ajraces references: GDB:454136; OMIM:158373 |
| A;MOLECULE CTPG: MRNA A;ROLECULE CTPG: 11025 FUDL. A;Cross-references: EMBL:AF074960; NID:g4151258; FID:g4151259; FIDN:AAD04345.1 C;Genetics: A;Gene: Slitz A;Gene: Slitz C;Superfamily: fruit fly slit protein; EGF homology; leucine-rich alpha-2-glycoprotein r | Query Match 7.3%; Score 152.5; DB 2; Length 1042; Best Local Similarity 18.9%; Pred. No. 0.0032; Matches 105; Conservative 48; Mismatches 159; Indels 245; Gaps 27; Qy 4 STERTLAVAVTLLHITRLALSTCPAACHCPLEAPKCAPGVGLVRDGC |
| Query Match 7.4%; Score 156; DB 2; Length 1025; Best Local Similarity 18.5%; Pred. No. 0.0018; Matches 101; Conservative 47; Mismatches 150; Indels 248; Gaps 23; | Db 411 TTVGSTTVGPTTVGSTTVPPAPCLPSPICHLILSKVFEPCHTVIPPLLFYEGG 467 Qy 53CKVÇAKQLNEDÇSKTQPCDHTKGL 76 |
| 24 STCPAACHCPLBAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDH 7 | VFDRCHMTDLDVVCSSLELYAALCASHDICIDWRGRTGHMCPFTCPADKVYQPCGPSNPS |
| ⊢ at | QY 77 ECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGE 111 |
| Db 552 TPKGFKCDCTPGYIGEHCDIDFDDCQDNKCKNGAHCTDAVNGYT 595 Qy 132 PLCPQELSLPNLGCPNPRLVKVSGQCCEEW 161 | QY 112 SFQPNCKHQCTCIDGAVGCIP-LCPQBLSLPNLGCPNPRLVKVSGQCCEEWVC 163 : : :: |
| | 164 DEDSIKOSLDDQDDLLGLDASEVELTRNNELIALGKGSSLKRLPV-FGTEPRVLFNPLHA |
| QY 162 VCDEDSIADSLDRODDLGGLDASEVELTRNNELIAI 197 | |
| QY 198 GKGSPL 220 Db 716 DTGSHPASAIYSVETINDGNFHIVELLTLDSSLSLSVDGGSPKVITNLSKQSTLNFDSPL 775 | 72 |
| Cy 221 HACRCIVQ 230 Db 776 YUGGMPGKNNVASLRQAPGONGTSFHGCIRNLYINSELQDFRKMPMQTGILPGCBPCHKK 835 | Db 724 THCPVGFEYQEQGQCGGTCVQVACVTNTSKSFAHLFYFGETWSDAGNHCVTHQCEKHQD 783 Qy 287TXKSPEPV |
| 231 TISWSQCSKSCGTGISTRVTND2 | 784 GLVVVTTKKACPPLSCSLDBARMSKDGCCRFCPLPPPPYQNQSTCAVYHRSLIIQQQGCS |
| 836 VCAHGMCQPSSQSGFTCECEEGMMGPLCDQRINDPCLGNKCVHGTCLPINAFSYSCKCLE 8 253NPECRLVK-BTRICEVRPCGQPVYSLKKGKKCSK-TKKSPEPV 2 | 303 SVKKYRPKYC-GSCVDG- BY SSEPVRLAYCKGNGDSS |
| OY 295 RPTYAGCSSVKKYRPKYC-GSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKAVMM 347 OY SEE PROVOKONOWALOWERSENERS | DD 904 EVEECGCMGRRCPAPGD 920 |
| 348 IQSCKC 353 : 1015 VVKCGC 1020 | RESULT 14 A53767 mucin WUCSB, tracheobronchial - human C;Species: Homo sapiens (man) C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 20-Apr-2000 C;Accession: A53767 |

579

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628 GQKWNDRVC-SC---GCPVP-----RPDCTNGQIYN-----INTCACGCGIDKPSCP 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87 LKGICRAQSEGRPCEYNSRIYQNGESFQP-NCKHQCTCIDGAVGC-----IPLCPQE 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              428 CKCVCPADKOMSPGGCGS----GKSFNKLTC--OCECDOSASKCGLKRWNADTCKCECO 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         304 VKKYRPKYCGSCVDGRCCTPLQTRTVKARPRCEDGEMFSKAVAMIQSCKCNYNCPHPNEA 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 138 LSLPNLGCPNPRLV--KVSGQCCEEWVCDEDSIKDSLDDQDDLLGLDASEVE-----LTR 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481 PGMPPEGCGKQTWISDKCKCECSPTITCQAPQILD-----LNTCECKCPVNMLAQ 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191 NNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQC----SKSCGTGI 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      246 STRVTNDNPECRLVKETRICEVRP-CGQP-VYSSLKKGKKCSKTKKSPEPVRFTYAGCSS 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30 CHCPLEAPKCAPGVGLVRDGCG -- C-CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       580 -NKKFFDKPSCECK-----CKNNPTCTSPQVWDADDCECKCPKDKQKPQ------GGGDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  531 KEKCKSPROWIDSKCLCECSTIPATCEGKOTWCGEAC-----OCICPGGDKNCG---
                   A;Status: not compared with conceptual translation
A;Nolecule type: DNA
A;Residues: 1-1700 c.PAU>
A;Residues: 1-1700 c.PAU>
A;Cross-references: GB:X52263; NID:g7057; PIDN:CAA36506.1; PID:g7058
C;Genetics:
A;Gene: BR3
A;Anp position: 4
C;Superfamily: unassigned Balbiani ring proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         66
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 2;
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Job time : 19.4566 secs
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R;Weerzaman, D.; Charles, P.; Daskal, E.; Polymeropoulos, M.H.; Martin, B.M.; Rose, M.C.
J. Biol. Chem. 269, 12932-12939, 1994
A;Tittle: Cloning and analysis of cDNA encoding a major airway glycoprotein, human trache
A;Reference number: A53767; MUID:94230376; PMID:7513696
A;Accession: A53767
A;Getaus: preliminary
A;Accession: A53767
A;Accession
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C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 21-Jul-2000
C;Accession: S08167
C;Accession: S08167
J: Mol. Biol. 211, 331-349, 1990
J: Mol. Biol. 211, 331-349, 1990
A;Title: The balbiani ring 3 gene in Chironomus tentans has a diverged repetitive struct
A;Reference number: S08167; MUD: 90172404; PMID:1689777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        558 VFDRCHMTDLDVVCSSLELYARLCAS--HDICIDWRGRTRTCAHHLPSRQGVPALRPSNP 615
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C;Species: Chironomus tentans
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gape
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ouery Match 7.2%; Score 152; DB 2; Length 105
Best Local Similarity 19.1%; Pred. No. 0.0035;
Matches 107; Conservative 57; Mismatches 152; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 STFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGC-
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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OM protein - protein search, using sw model

April 22, 2004, 17:52:34; Search time 10.4724 Seconds (without alignments) 1884.444 Million cell updates/sec Run on:

Title: Perfect score:

US-09-495-448A-2 2103 1 MSSSTFRTLAVAVTLIHLTR......PNBASFRLYSLFNDIHKFRD 379 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

141681 Total number of hits satisfying chosen parameters: 141681 seqs, 52070155 residues Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_42:*

Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

| | cripti | P18406 mus musculu | Q9es72 rattus norv | 2 homo 8 | | rattus | P29268 mus musculu | P29279 homo sapien | pos | | P28686 gallus gall | cotu | P48745 homo sapien | | | xeno | | mus 1 | Q99ppO rattus norv | O95389 homo sapien | mus m | 076076 homo sapien | rattr | | | | homo | | chir | Q9bu40 homo sapien | ratto | canie | homo | |
|-----------|-----------|--------------------|--------------------|------------|------------|----------|--------------------|--------------------|------------|----------|--------------------|-----------|--------------------|---------|-----------|-----------|------------|------------|--------------------|--------------------|------------|--------------------|----------|------------|------------|------------|------------|------------|------------|--------------------|----------|--------|------------|------------|
| SUMMARIES | CI. | CYR6 MOUSE | CYR6 RAT | CYR6 HUMAN | CE10 CHICK | CTGF_RAT | CIGF MOUSE | CTGF HUMAN | CTGF_BOVIN | CTGF_PIG | NOV CHICK | NOV COTJA | NOV HUMAN | NOV RAT | NOV MOUSE | NOV_XENLA | WSP1 HUMAN | WSP1 MOUSE | WSP1_RAT | WSP3 HUMAN | WSP2 MOUSE | WSP2_HUMAN | WSP2 RAT | SLT2_HUMAN | NRL1_MOUSE | NRL1_CHICK | LMA2_HUMAN | MUSA HUMAN | BAR3 CHITE | NRL1 HUMAN | MUCL_RAT | | MUSB HUMAN | LRP2_HUMAN |
| | Length DB | 379 1 | | | | | | 349 1 | | | | | 357 1 | 351 1 | 354 1 | 343 1 | 367 1 | 367 1 | 367 1 | 354 1 | 251 1 | 250 1 | | | | 456 | | 233 | 700 | | | 2813 1 | | 655 |
| d | ery | 100.0 | | | • | | | 45.2 | | | | ċ | ę. | 9 | σ | σ | 9 | 9 | Θ | σ | LO. | 24.9 | 'n. | | | • | • | • | | • | • | 6.9 | • | • |
| | й | 2103 | 2079 | 1938 | 1646.5 | 960 | 957.5 | 950 | 937 | 919 | 861 | 856 | 839.5 | 829.5 | 827 | 824.5 | 773 | 758.5 | 757 | 622 | 526.5 | 524 | 492 | 166 | 158 | 154 | 154 | 152.5 | 151.5 | 148 | 146 | 4 | 44 | 4 |
| | | | 7 | 3 | 4 | ហ | 9 | 7 | 6 0 | o, | 010 | 11 | 12 | 13 | 14 | 15 | 16 | | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 53 | 30 | 31 | 32 | 33 |

| Q28833 sus scrofa Q13751 homo sapien Q996n6 homo sapien Q88799 mus musculu P57999 oryctolagus Q60575 mus musculu P35440 gallus gall Q25464 mytilus gall Q25464 mytilus gall Q26817 homo sapien Q91118 mus musculu Q97118 mus musculu | |
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| UWF PIG LMB3 HUMAN LMM3 HUMAN ZAN MOUSE ZAN RABIT LMM2 MOUSE TSP2 CHICK FP2 MYTGA MUCZ HUMAN HRAA MOUSE HRAA MOUSE | |
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| 2482 11172 11582 2282 32882 1178 11964 5179 480 | |
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| 143 141.5 141.141 140.5 139.5 139.5 139.5 136.136 136.5 | |
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ALIGNMENTS

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immediate early growth requisitory game CYR61.";

U. Biol. Chem. 275:28929-28936(2000).

I. FUNCTION: Promotes cell proliferation, chemotaxis, angiogenesis and cell adhesion. Appears to play a role in wound healing by upregulating, in skin fibroblasts, the expression of a number of genes involved in angiogenesis, inflammation and matrix remodeling including VBGA-A, VBGA-C, MMP1, MMP3, TIM1, uPA, PAI-1 and incepting alpha-3 and alpha-5 (By similarity). Cyr61-mediated gene regulation is dependent on heparin-binding (By similarity). Down-regulates the expression of alpha-1 and alpha-5 subunits of collagen type-1 (By similarity). Promotes cell adhesion and adhesive signaling through integrin alpha-1/beta-5 and cell proliferation through integrin alpha-1/beta-3 and cell proliferation through integrin approached and promotes cell adhesion (By similarity).

SUBUNIT: Interaction with integrins is heparin- and cell-type-dependent and promotes cell adhesion (By similarity).

SUBCELLUIAR LOCATION: Secreted.

SIMILARITY: Contains I IGPBP domain.

SIMILARITY: Contains I TSP type-1 domain.

SIMILARITY: Contains I TSP type-1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the SWBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                               301 CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHP 360
                                                                                                                                                                                                              CSSVKKYRPKYCGSCVDGRCCTPLQIRIVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHP 360
                                                                            CGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                                                                                                                       241 CGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                             LDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGOKCIVQTTSWSQCSKS 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Lung,
MEDLINE-20435857; PubMed=10852911;
Albrecht C., von Der Kammer H., Mayhaus M., Klaudiny J., Schweizer M.,
Nitsch R.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalla, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation update)
CYR61 protein precursor (Cysteine-rich, angiogenic inducer, 61)
(Insulin-like growth factor-binding protein 10).
                                                                                                                                                                                                                                                                                                                                                                                                                                                     379 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR006208; Cys knot.
InterPro; IPR006207; Cys knot C.
InterPro; IPR000867; Tunal gro_fac_pr.
InterPro; IPR000884; TSPI.
                                                                                                                                                                                                                                                                              NEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                 361 NEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus (Rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10116;
                               181
                                                                               241
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Q9ES72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 LDASEVELTRINNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKS 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
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-!- DEVELOPMENTAL STAGE: EXPRESSED FROM G(0)/G(1) THROUGH MID-G(1) IN NORMAL CELLS, AND AT A CONSTANT LEVEL IN RAPIDLY GROWING CELLS.
-!- INDUCTION: By growth factors, family.
-!- SIMILARITY: Belongs to the CCN family.
-!- SIMILARITY: Contains 1 IGFBP domain.
-!- SIMILARITY: Contains 1 TYP type-1 domain.
-!- SIMILARITY: Contains 1 TYP type-1 domain.
-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MSSSTFRTLAVAVTLIHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWART; SM00214; VWC; 1.
PROSITE; PS01185; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS01022; IGF BINDING; 1.
PROSITE; PS01092; TSP1; 1.
PROSITE; PS01209; VWFC 2; 1.
PROSITE; PS01084; VWFC 2; 1.
Chemotaxis; Cell adhesion; Growth factor binding; Heparin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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HEPARIN-BINDING.
CTC.
CTC.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MGD; MGI:88613; Cyr61.

GO; GO:0001569; P:patterning of blood vessels; IMP.
InterPro; IPR006208; Cys_knot.
InterPro; IPR006207; Cys_knot_C.
InterPro; IPR00867; Insl_gro_fac_pr.
InterPro; IPR000867; INSl_gro_fac_pr.
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ilarity 100.0%; Pred. No. 2.3e-156;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
CYR61 PROTEIN.
VWFC.
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Pfam; PF00007; Cys Knot; 1.
Pfam; PF00019; IGFBP; 1.
Pfam; PF00093; vwc; 1.
SMART; SM00121; IS; 1.
SMART; SM00121; IS; 1.
SMART; SM00121; IS; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M32490; AAA37512.1; -.
EMBL; X56790; CAA40109.1; -.
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MGD; MGI:88613; Cyr6
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315
320
379 AA;
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WEDLINE=22388257; PubMed=12477932;

XETAUSDERG R. FROWN N.A.

ALTARUBERG R.L., Feingold E.A., Gruse L.H., Derge J.G.,

RIJANE=22388257; PubMed=12477932;

XI Caraubberg R.L., Feingold E.A., Gruse L.H., Schemen C.M., Schuler G.D.,

RIJANER R.L., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Jordan H., Moore T., Max S.I., Wang L.,

Botchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Rab S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Rab S.S., Worben P.J., McKernan K.J., Malek J.A., Gay L.J., Hulyk S.W.,

N. Nilalon D.K., Wuzny D.M., Sodergen B.J., Lu X., Gibbs R.A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Mitching M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Redriquez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butherfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

Rochection and initial analysis of more than 15,000 full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schuetze N., Lechner A., Groll C., Koehrle J., Jakob F.; "Regulation of hCYR61 by vitamin D, serum and cytokines in fetal human osteoblasts.";
                                                                                                                                     SEQUENCE FROM N.A.
Albrecht C., von der Kammer H., Klaudiny J., Mayhaus M., Nitsch R.M.;
Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                            "The human growth factor-inducible immediate early gene, CYR61, maps
                      Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         leng B., Tai G., Estable M., Liu J., Chow C., Sadowski I.;
Organization and expression of the CYR61 gene in normal human
tibroblasts.";
                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
MEDLINE-97280750; PubMed-9135077;
Jay P., Berge-Lefranc J.L., Marsollier C., Mejean C., Taviaux
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nguyen V.C., Perbal B.;
of the human cyr61 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
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Submitted (JUN-1997) to the EMBL/GenBank/DDBJ databases
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Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=98197344; PubMed=9536281;
Martinerie C., Viegas-Pequignot E.,
"Chromosomal mapping and expression
cells from the nervous system.";
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  OR IGFBP10 OR CCN1 OR GIG1.
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MEDLINE=21601638; Pubmed=1158401
Chen C.-C., Mo F.-E., Lau L.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mol. Pathol. 50:310-316(1997)
                                                                                                                                                                                                                                                                                                                                                     to chromosome lp.";
Oncogene 14:1753-1757(1997).
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Submitted (NOV-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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                                                                                           NCBI_TaxID=9606;
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TSP TYPE-1.
HEPARIN-BINDING (BY SIMILARITY).
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000622, 014934, 043775, Q9BZL7;
15-UTL-1998 (Rel. 36, Created)
15-UTL-1998 (Rel. 36, Last sequence update)
10-007-2003 (Rel. 42, Last annotation update)
CYRÉ1 proceain precursor (Cysteine-rich, angiogenic inducer, 61)
(Insulin-like growth factor-binding protein 10) (GIG1 protein).
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Pred. No. 1.7e-154;
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SWART; SM00141; CT; 1.
SWART; SM00121; IB; 1.
SWART; SM001214; LWC; 1.
SWART; SM00214; VWC; 1.
PROSITE; PS01185; CTCK, 1; 1.
PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS50092; TSP1; 1.
PROSITE; PS50094; VWFC_2; 1.
PROSITE; PS50094; VWFC_2; 1.
PROSITE; PS50184; VWFC_2; 1.
PROSITE; PS50184; VWFC_2; 1.
PROSITE; PS50184; VWFC_2; 1.
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Matches 374; Conservative
  InterPro; IPR001007; VWF
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379 AA;
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Matches 350; Conservative
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REAL J. BIOL. CLOW WITH INTEGRIN ALPHA-V/BETA-6.

REALINE=21293087, PubMed=11287419;

REALINE=2139087, PubMed=11287419;

REALINE=2139087, PubMed=11287419;

REALINE=213987, PubMed=11287419;

REALINEARTY: Contains 1 TSP type-1 domain.

REALINE=213987, PubMed=11287419;

REALINE=213987, PubMed=11287419;

REALINE=213987, PubMed=11287419;

REALINE=213887, PubMed=112887419;

REALINE=21388747;

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MEDLINE=20387398; PubMed=10821835;
Chen N., Chen C.-C., Lau L.F.;
"Adhesion of human skin fibroblasts to Cyr61 is mediated through integrin alpha6betal and cell surface heparan sulfate proteoglycans.";
J. Biol. Chem. 275:24953-24961(2000).
"The angiogenic factor Cyr61 activates a genetic program for wound healing in human skin fibroblasts."; J. Biol. Chem. 276:47329-47337(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INTERACTION WITH INTEGRIN ALPHA-IIB/BETA-3.
MEDLINE=99377072; PubMed=10446209;
Jedsadayanmata A., Chen C.-C., Kreeva M.L., Lau L.F., Lam S.C.;
"Activation-dependent adhesion of human platelets to Cyr61 and
Fispl2/mouse connective tissue growth factor is mediated through
integrin alpha(IIb)Deta(3).";
J. Biol. Chem. 274:24321-24327(1999).
                                                                                                                                                                                                                                         Kireeva M.L., Lam S.C., Lau L.F.; "Adhesion of human umbilical vein endothelial cells to the limmediate-early gene product Cyr61 is mediated through integrin
                                                                                                                                                                        INTERACTION WITH INTEGRIN ALPHA-V/BETA-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                               J. Biol. Chem. 273:3090-3096(1998)
                                                                                                                                                                                                               MEDLINE=98112865; PubMed=9446626;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; Y12084; CAA72802.1; -. EMBL; U62015; AAB58319.1; -.
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EMBL; EMBL; EMBL;

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120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           238
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYN 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFQPNCKHQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179 -- LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   239 CSKTCGTGISTRVINDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MSSSTFRTLAVAVTLIHITRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6; Gaps
                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS010225; TCK_2; 1.
PROSITE; PS00092; TSPI; 1.
PROSITE; PS01084; VWFC_1; 1.
PROSITE; PS01184; VWFC_2; 1.
Chemotaxis; Cell adhesion; Growth factor binding; Heparin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VWPC.
TSP TYPE-1.
TSP TYPE-1.
TSP TYPE-1.
CTCK.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 381;
MIM; 602369; CIROL.
GO; GO:000283; P:cell proliferation; TAS.
GO; GO:000283; P:cell proliferation; TAS.
GO; GO:007345; P:embryogenesis and morphogenesis; TAS.
INTERPRO: IPR006208; Cys knot.
INTERPRO: IPR00687; INSI_GROP.
INTERPRO: IPR000884; INSI_GROP.
INTERPRO: IPR001007; VWP.C.
Pfam; PF00219; IGFBP; 1.
Pfam; PF00219; IGFBP; 1.
Pfam; PF00093; VWC; 1.
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L -> I (IN REF. 5).
L -> R (IN REF. 5).
F -> L (IN REF. 7).
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91.4%; Pred. No. 1.5e-143;
live 9; Mismatches 18;
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CYR61 PROTEIN.
IGFBP.
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                                                                                                                                                                Gallus gallus (Chicken).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
Gallus.
                                                                     01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
                                                     375 AA
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SIMILARITY.
SIMILARITY.
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SIMILARITY.
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TSP TYPE-1.
CTCK.
BY SIMILARITY
BY SIMILARITY
BY SIMILARITY
BY SIMILARITY
BY SIMILARITY
BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR006208; Cys knot.
InterPro; IPR006207; Cys knot.
InterPro; IPR006207; Cys knot.
InterPro; IPR000867; Insl_gro_fac_pr.
InterPro; IPR0000867; Insl_gro_fac_pr.
InterPro; IPR0000967; TysI.
InterPro; IPR00007; Cys knot; I.
Pfam; PP00090; tsp_1; I.
Pfam; PP00090; tsp_1; I.
SMART; SM00121; IRP; I.
SMART; SM00219; TSP1; I.
SMART; SM00214; VWC; I.
SMART; SM00214; VWC; I.
PROSITE; PS01285; CTCK_1; I.
PROSITE; PS01285; CTCK_2; I.
PROSITE; PS01285; TSPI; I.
PROSITE; PS01208; VWFC_2; I.
359 CPHANEAAFPFYRLFNDIHKFRD 381
                                                                                                                                                                                                                                                                                                                                                              EMBL; J04496; AAA48661.1; -.
                                                                                             CEF-10 protein precursor
                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                       PIR; A41428; A41428.
                                                                                                                                                  NCBI_TaxID=9031;
                                                     CHICK
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DISULFID
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Teruka K., Tamatani T.;
Teruka
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240 TGISTRVTNDNPDCKLIKETRICEVRPCGQPSYASLKKGKKCTKTKKSPSPVRFTYAGGS 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300 SVKKYRPKYCGSCVDGRCCTPQQTRTVKIRFRCDDGBTFTKSVMMIQSCRCNYNCPHANB 359
                                                                                                                                                                                                                                                                                                                                                                                                                                               128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            129 GCIPLCPQELSLPNLGCPNPRLVXVSGQCCEEWVCDEDSIXDSLDDQDDL----LGLDAS 184
                                                                                                                                                                                                                                                                   68
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MEDLINE=2014-5935; PubMed=10679821;
Xu J., Smack S.L., Safadi F.P., Rosenzweig A.B., Odgren P.R.,
Marks S.C. Jr., Owen T.A., Popoff S.N.;
"Cloning the full-length cDNA for rat connective tissue growth factor:
"Indications for skeletal development.";
jmplications for skeletal development.";
Cell. Biochem. 77:103-115(2000).
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                                                                                                                                                                                                                                                                                                                                                         9 ALAAALICLARIALGSPCPAVCQCPAAAPQCAPGVGIVPDGCGCCKVCAKQINEDCSRTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                               PCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQCTCIDGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              185 EVELTRINBELIAIGKGSSLKRLPVFGTEP--RVLFNPLHAHGQKCIVQTTSWSQCSKSCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCS
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Eukaryota; Merazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                            Gaps
                                                                                                                                                                                 17;
                                                                                      DB 1; Length 375;
                                                                                                                                                                            Indels
375 AA; 40651 MW; 95F28553BE35D5AE CRC64;
                                                                                                                                                                                 36;
                                                                                 78.3%; Score 1646.5; DB 1
80.1%; Pred. No. 6.7e-121;
iive 22; Mismatches 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGF RAT STANDARD; PRT; 347 AA. Q9R1E9; Q9WVS1; 28-FEB-2003 (Rel. 41, Created) 28-FEB-2003 (Rel. 41, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation update) Connective Lissue growth factor precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360 A-YPFYRLVNDIHKFRD 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    363 ASFRLYSLFNDIHKFRD 379
                                               Query Match
Best Local Similarity 80.15,
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    SECUENCE
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298 YAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNC 357
                                                                                               PHPNEASFRLY -- SLFNDI 374
                                                                                                                                               PGDNDIFESLYYRKMYGDM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA Cell Biol. 10:293-300(1991).
                                                                                                                                                                                                                                                                        STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                           MOUSE
                                                                                                  358
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                                                                                                                                                                                                                           RESULT
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                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its work non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119 HOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDL 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ------KDRTVVGPALAAYRLEDTFGPDPTMM-----RANCLVQTTEWSAC 207
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YQCTCLDGAVGCVPLCSMDVRLPSPDCPFPRRVKLPGKCCBEWVCDBP------
  SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MSSSTRRILAVAVTLIHLTRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCAK
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PROSITE; PS01285; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS00229; TSP1; 1.
PROSITE; PS50032; TSP1; 1.
PROSITE; PS501208; VWFC 1; 1.
PROSITE; PS50184; VWFC 2; 1.
Cell adhesion; DNA synthesis; Extracellular matrix; Heparin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
CONNECTIVE TISSUE GROWTH FACTOR
TISSUE OFFICE
WFC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          45.6%; Score 960; DB 1; Length 347; 46.4%; Pred. No. 1.4e-67; ive 61; Mismatches 104; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CFBE1A19766B7B16 CRC64;
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HEPARIN-BINDING (BY S. CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
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A SY SIMILARITY.

(IN REF. 2).
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InterPro; IPR006208; Cya knot.
InterPro; IPR006207; Cya knot.
InterPro; IPR000867; InsI gro_fac.pr.
InterPro; IPR0000864; TSP1.
InterPro; IPR001007; VWF.C.
Pfam; PF00107; Cya knot; 1.
Pfam; PF00219; IGFB9; 1.
Pfam; PF00019; ISP00107; VWC; 1.
                                                                                                                                                                                                                                              EMBL; AF120275; AAD39132.1; -.
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37756 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00093, ...;
SMART; SM00041; CT; 1.
SWART; SM00121; IB; 1.
SMART; SM00209; TSP1; 1.
SMART; SM00214; VMC; 1.
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347 AA;
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MEDLINE=22388257; PubMed=12477932;
A Klausner Krown N.A.
A Klausner R.D., Collins F.S., Wagner L., Sheamen C.M., Schuler G.D.,
A Altschul S.F., Zeeberg B. Buttow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Zeeberg B., Butcow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Zeeberg B., Butcow K.H., Schaefer C.F., Bhat N.K.,
A Altschul S.F., Zeeberg B., Butcow K.H., Schaefer C.F., Bhat N.K.,
A both of the colling F.S., Farmer T.A., Wand J., Heieh F.,
A branchen M.J. Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Brans S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Mallahy S.J.,
Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gibbs R.A.,
A Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Vilalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
A Niting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
Blakeeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
Generation and initial analysis of more than 15,000 full-length
L. Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
268 LSGCTSVKTYRAKFCGVCTDGRCCTPHRITTLPVEFKCPDGEIMKKNMMFIKTCACHYNC 327
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MEDLINE=97327410; PubMed=9184077;
Kireeva M.L., Latinkic B.V., Kolesnikova T.V., Chen C.C., Yang G.P.,
Abler A.S., Lau L.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-99182484; PubMed=10082563;
Babic A.M., Chen C.C., Lau L.F.;
"Fisp12/mouse connective tissue growth factor mediates endothelial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

BELLINE-91229699; PubMed=2029337;
Brunner A., Chinn J., Neubauer M.G., Purchio A.F.;

Midentification of a gene family regulated by transforming growth
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=91362290; PubMed=1888698; Ryseck R.-P., Macdonald-Bravo H., Mattei M.-G., Bravo R.; Ryseck R.-P., Macdonald-Bravo H., Mattei M.-G., Bravo R.; Structure, mapping, and expression of fisp-12, a growth factorindiable gene encoding a secreted cysteine-rich protein."; Cell Growth Differ. 2:225-233(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Abler A.S., Lau L.F.;
"Cyrfel and Fispl2 are both ECM-associated signaling molecules: activities, metabolism, and localization during development."; activities, metabolism, 233:63-77 (1997).
                                                                                                                                                                                                                                                                                                                                                                                                        P39268 0922U0,
10-DEC-1992 (Rel. 24, Created)
28-FBB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
10-OCT-2003 (Rel. 42, Last annotation update)
10-OCT-2004 (Rel. 42, Last annotation update)
10-OCT-2005 (Rel. 42, Last annotation update)
10-OCT-2006 (Rel. 42, Last annotation update)
10-OCT-2003 (Rel. 43, La
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349 AA
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                                                                     37794 MW;
                                                                                           45.5%;
                                                                                                    al Similarity 46.8%
178; Conservative
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348 AA;
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        soluble form.

--- TISSUB SPECIFICITY: TESTIS, SPLEEN, KIDNEY, LUNG, HEART, AND BRAIN (LOWEST LEDGE IN TESTIS AND HIGHEST IN LUNG).

--- INDUCTION: By growth factors.
---- SIMILARITY: Delongs to the CCN family.
---- SIMILARITY: Contains 1 IGFBP domain.
---- SIMILARITY: Contains 1 TSP type-1 domain.
---- SIMILARITY: Contains 1 TSP type-1 domain.
---- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cell adhesion; DNA synthesis; Extracellular matrix; Heparin-binding;
cell adhesion and migration through integrin alphavbeta3, promotes
                                                                                                                                                                                                                                                                                                                                                                        EMBL; MC0253; AA405783.1; --
EMBL; MC19553; AA405783.1; --
MCD; MC19553; Ctgf.
GO; GO:0008201; F:heparin binding; IDA.
GO; GO:000817; F:heparin binding; IDA.
GO; GO:000155; P:angiogenesis; IDA.
GO; GO:00155; P:enll migration; IDA.
GO; GO:00155; P:enll migration; IDA.
GO; GO:000153; P:CFl = Cceptor signaling pathway; IDA.
GO; GO:0007229; P:integrin-mediated signaling pathway; IDA.
GO; GO:0007229; P:httegrin-mediated signaling pathway; IDA.
GO; GO:000153; P:cSsification; IMP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TEP TYPE-1.
HEPARIN-BINDING (BY SIMILARITY)
CTCK.
                                                                                                                                                                                                                                                                                                                                                                                                                                          GO; GO:0001525; F:aug. GO; GO:0016477; P:cell migration; luw.

GO; GO:000166; P:cell-matrix adhesion; II

GO; GO:0008543; P:cell-matrix adhesion; II

GO; GO:0008543; P:rGF receptor signaling

R GO; GO:0001503; P:ntregrin-mediated signa

R GO; GO:0001503; P:ossification; IMP.

INTERPRO; IPR006209; Cys Knot.

DR InterPro; IPR006807; Cys Knot.

DR InterPro; IPR000867; Insl_gro_fac_pr.

DR InterPro; IPR001007; VWF_C.

DR InterPro; IPR001007; VWF_C.
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IGFBP.
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PROSITE; P801185; CTCK 1, 1.
PROSITE; P801225; CTCK 2; 1.
PROSITE; P805022; IGF_EINDING; 1.
PROSITE; P8050092; TSPI; 1.
PROSITE; P801208; VWFC 1; 1.
PROSITE; P801208; VWFC 2; 1.
                                                                                                                                                                                                                                                                                                                                           EMBL, M70641; AAA37627.1; -.
EMBL, M70642; AAA37628.1; -.
EMBL, M80263; AAA73135.1; -.
EMBL, BC006783; AAH06783.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pfam; PF00007; Cys knot; Pfam; PF00019; IGFBP; 1. Pfam; PF000090; tsp_1; 1. SParr; SM00041; CT; 1. SMART; SM00121; IB; 1. SMART; SM00121; IB; 1. SMART; SM00121; IB; 1. SMART; SM00121; IB; 1.
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TISSUE-Umbilical vein endothelial cells;

MEDLINE-91373462; PubMed=16643138;

Bradham D.M., Igarashi A., Potter R.L., Grotendorst G.R.;

Bronnective tissue growth factor: a cysteine-rich mitogen secreted by human vascular endothelial cells is related to the SRC-induced immediate early gene product CEF-10.";

J. Cell Biol. 114:1285-1294(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            58 KQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     118 KRQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169 -----RANCLVQTEWSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      237 CSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               208 CSKTCGMGISTRVTNDNTFCRLEKQSRLCMVRPCEADLBENIKKGKKCIRTPKIAKPVKF
                                                                                                                                                                                                                                                                                                                                                                             1 MSSSTFRTLAVAVTLIHL-TRLAL-STCPAACHCPLE-APKCAPGVGLVRDGCGCCKVCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120 KYQCTCLDGAVGCVPLCSMDVRLPSPDCPPPRRVKLPGKCCEEWVCDEP------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  297 TYAGCSSVKKYRPKYCGSCVDGRCCTPLOTRIVKMRFRCEDGEMFSKNVMMIQSCKCNYN
                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MLASVAGPISLALVLLALCTRPATGODĆSAQCQCAABAAPHČPAGVSLVLDGCGCCRVCA
                                                                                                                                                                                                                                                                                                                    Gaps
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01-DBC-1992 (Rel. 24, Created)
10-DCT-2003 (Rel. 42, Last sequence update)
10-OCT-2003 (Rel. 42, Last sequence update)
Connective tissue growth factor precursor (Hypertrophic chondrocyte-
specific protein 24).
CTGF OR CCN2 OR HCS24.
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Mammalia; Eutheria, Primates, Catarrhini, Hominidae, Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                 39;
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BY SIMILARITY.
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W; 4D7B6D9089174049 CRC64;
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TISSUE=Umbilical vein endothelial cells;

MEDINE=93187114; PubMed=1293144;

Igarashi A., Bradham D.M., Okochi H., Grotendorst G.R.;

"Connective Lissue growth factor.";

J. Dermatol. 19:642-643 (1992).
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Pred. No. 2.2e-67;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license gareement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                              HEPARIN-BINDING, AND CELL ADHESION.

MEDINE=2245756; Pubmed=12553878;

A Bill D.K., Rachfal A.W., Kemper S.A., Brigstock D.R.;

Ball D.K., Rachfal A.W., Kemper S.A., Brigstock D.R.;

Ball D.K., Rachfal A.W., Kemper S.A., Brigstock D.R.;

T factor (CTGF) containing module 4 alone stimulates cell adhesion.";

L J. Endocrinol. 176:R1-R7(2003).

-!- FUNCTION: Major connective tissue mitoattractant secreted by vascular endochelial cells. Promotes proliferation and divalent cation-dependent cell adhesion in many cell types including fibroblasts, myofibroblasts, endochelial and epithelial cells.

Enhances fibroblast growth factor-induced DNA synthesis.

-!- SUBGNILT: Monomer.

-!- SUBCELLUMAR LOCATION: Found in the extracellular matrix and as a soluble form (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     There are no restrictions on ng as its content is in no
                                                                                                                                                                                                                                         TISSUB=Chondrocytes;
MEDLINE=20080224; PubMed=10614647;
MEDLINE=20080224; PubMed=1.0614647;
Makanishi T., Nishida T., Shimo M.;
Tamatani T., Pezuka K., Takigawa M.;
"Effects of CTGF/Hcs24, a product of a hypertrophic chondrocytespecific gene, on the proliferation and differentiation of
TISSUE=Aorta;

MEDLLNE=97207446; PubMed=9054739;

OGMAR B.S., Werner A., Garnier J.M., Do D.D., Godoy N., Nauck M.,

Marz W., Rupp J., Pech M., Luescher T.F.;

"Human connective tissue growth factor is expressed in advanced atherosclerotic lesions.";

Circulation 95:831-839(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO:0005578; C:extracellular matrix; TAS.
GO:0005886; C:plasma membrane; TAS.
GO:000520; F:insulin-like growth factor binding; TAS.
GO:00011: P:cell growth and/or maintenance; TAS.
GO:0008544; P:epidermal differentiation; TAS.
GO:0005611; P:response to wounding; TAS.
                                                                                                                                                                      Cobley V.;
Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Event=Alternative splicing; Named isoforms=2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR006208; Cys_knot.
InterPro; IPR006207; Cys_knot_C.
InterPro; IPR000867; Insl_gro_fac_pr.
                                                                                                                                                                                                                                                                                                                                   specific gene, on the proliferati
chondrocytes in culture.";
Endocrinology 141:264-273(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; M92934; AAA91279.1; -.
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PIR, A40551, A40551.
Genew, HGNC:2500, CTGF.
                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                             FUNCTION
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53 CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES 112
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              116 PÓSSCKYÓCTCLDGAVGCMPLCSMDVRLPSPDCPFPRRVKLPGKCCBEWVCDEPK---- 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             171 - DO------RANCLVQT 203
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        264 KPIKFBLSGCTSMKTYRAKFCGVCTDGRCCTPHRTTTLPVBFKCPDGEVMKKNMMFIKTC 323
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173 DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSSSTPRTLAVAVTLLHLTRLALSTCPAA-----CHCPLE-APKCAPGVGLVRDGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MTAASMGPVRVAFVVL----LALCSRPAVGQNCSGPCRCPDEPAPRCPAGVSLVLDGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48; Gaps
                                                                                                                     SMART; SM00041; CT; 1.
SMART; SM00041; CT; 1.
SMART; SM001214; UR; 1.
SMART; SM00214; VW; 1.
SMOSTE; PS01214; VW; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS0022; TSP] 1.
PROSITE; PS0022; TSP] 1.
PROSITE; PS0022; TSP] 1.
PROSITE; PS0020; TSP] 1.
Cell adhesion; DNA synthesis; Extracellular matrix; Heparin-binding; Signal; Alternative splicing.
POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TEP TYPE-1.
HEPARIN-BINDING.
CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N'LINKED (GLCNAC. . .) (POTENTIAL).
N'LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
CONNECTIVE TISSUE GROWTH FACTOR.
IGFBP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97; Indela
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0ECF8470B357EA95 CRC64;
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/FTId=VSP 002460.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45.2%; Score 950; DB 1;
45.7%; Pred. No. 8.3e-67;
tive 64; Mismatches 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ä
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KCNYNCPHPNEASFRLY -- SLFNDI 374
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38069 MW;
InterPro; IPR000884; TSP1.
InterPro; IPR001007; VWF C.
Pfam; PF00007; Cys knot; 1.
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349 AA;
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Best Local Similarity
Matches 176; Conserv
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ID _CTGF_BOVIN
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SEQUENCE FROM N.A.
TISSUE=Uterus;
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019113;
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CTGF_PIG
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Amethans M., Schwitters C., Hove M., Rupp S., Erondu N.E.;

Amethans M., Schwitters C., Hove M., Rupp S., Erondu N.E.;

Thromosomal gene and demonstration of promoter activity.";

Louding Sip-2000 to the EMBL/GenBank/DDBJ databases.

Submitted (SIP-2000) to the EMBL/GenBank/DDBJ databases.

- FUNCTION: Major connective tissue mitoatractant secreted by vascular endothelial cells. Promotes proliferation and differentiation of chondrocytes (By similarity). Mediates heparinced differentiation of chondrocytes (By similarity). Mediates heparinced including fibroblasts, myofibroblasts, endothelial and epithelial colls with synthesis (By similarity).

- SUBUNIT: Monomer (By similarity).

- SUBUNIT: Monomer (By similarity).

- SUBULLARITY: Belongs to the CCN family.

- SIMILARITY: Contains 1 UGFBP domain.

- SIMILARITY: Contains 1 UGFBP domain.

- SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lab.sib.ch).
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PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS00222; IGF EINDING; 1.
PROSITE; PS00203; TSPI 1.
PROSITE; PS0108; VWFC 1; 1.
PROSITE; PS0184; VWFC 2; 1.
PROSITE; PS0184; VWFC 2; 1.
Cell adhesion; DNA synthesis; Extracellular matrix; Heparin-binding; Signal 1.
26 POTENTIAL.
CHAIN 27 349 CONNECTIVE TISSUE GROWTH FACTOR.
                                                                                Bos taurus (Bovine).
Sukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinee; Bos
                                                                                                                                                                                       Liliensiek B., Lin Z., Fotsis T., Schimanski M., Bierhaus A., Kanitz M., Kauffmann G., Schweigerer L., Ziegler R., Nawroth P.P.; Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
O18739; Q9GL71;
15-JUL-1998 (Rel. 36, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Connective Lissue growth factor precursor.
CTGF OR CCN2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF000137; AAB66596.1; -
EMBL; AF309555; AAG30290.1; -
INTERPRO; IPR006209; Cyg knot.
INTERPRO; IPR000807; Cyg knot.
INTERPRO; IPR000807; ISPI.
INTERPRO; IPR000807; ISPI.
INTERPRO; IPR001007; VWF C.
Pfam; PF00207; Cyg knot; 1.
Pfam; PF00209; tsp. 1; 1.
Pfam; PF00099; tsp. 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00041; CT; 1.
SMART; SM00121; IB; 1.
SMART; SM00209; TSP1;
SMART; SM00214; VWC; 1
                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                    NCBI_TaxID=9913;
                                                                                                                                                                             TISSUE=Aorta;
Liliensiek B.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  351
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116 FQSSCKYQCTCLDGSVGCVPLCSVDVRLPSPDCPFPRRVKLPGKCCEEWVCDEP-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MSATGLGPVRCAFVLL --- LALCSRPASSQDCSAPCOCPAGPAPRCPAGVSLVLDGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53 CKVCAKOLNEDCSKTOPCDHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYONGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    173 DDQDDLLGLDASEVELTRNNELIAIGKG-SSLKRLPVFGTEPRVLFNPLHAHGQKÇIVQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   232 TSWSQCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  292 EPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKWRFRCEDGEMFSKNVMMIQSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MSSSTFRTLAVAVTLIHLTRLALST-----CPAACHCPL-EAPKCAPGVGLVRDGCGC
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Cetartiodactyla, Suina, Suidae, Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=97390475, PubMed=9242708;
Brigstock D.R., Steffen C.L., Kim G.Y., Vegunta R.K., Diehl J.R.,
Harding P.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48;
                                         TSP TYPE-1.
HEPARIN-BINDING (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                44.6%; Score 937; DB 1; Length 344.7%; Pred. No. 8.5e-66; ive 65; Mismatches 100; Indels
                                                                      CTCK.

BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
D -> DC (IN REF. 1).
A -> T (IN REF. 1).
CDEP -> SRDE (IN REF. 1).
CDEP -> SRDE (IN REF. 1).
CDEP -> SRDE (IN REF. 1).
CDEP -> G(IN REF. 1).
CDEP -> G(IN REF. 1).
CDEP -> G(IN REF. 1).
C -> Y (IN REF. 1).
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15-JUL-1998 (Rel. 36, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
CTGF OR CCN2.
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                                                                                                                                                                                                                                                                                                                                                                                             37924 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 44.7
Matches 172; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
209
269
284
349 AA;
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|::||||| | |:: ||| || || |:||: || CRLCAKQLGELCTERDPCDPHKGLFCDFGSPANRKIGVCTAK-DGAPCVFGGTVYRSGES 115

57 113 116

POPNCKHOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWYCDEDSIKDSL 172

173 DDQDDLLGLDASBVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQT

231

204 TEWSACSKTCGMGISTRVTNDNAFCRLEKOSRLCMVRPCEADLEENIKKGKKCIRTPKIS 263

TSWSQCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSP 291

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264 KPVKFELSGCTSVKTYRAKFCGVCTDGRCCTPHRTTTLPVBFKCPDGEVMKKSMMFIKTC 323

292 EPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSC 351

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"Purification and characterization of novel heparin-binding growth factors in uterine secretory fluids. Identification as heparin-
Education in uterine secretory fluids. Identification as heparin-
Education of 10,000 forms of connective tissue growth factor.";

"Signal Tegulated Mr 10,000 forms of connective tissue growth factor.";

"I shall chem. 272.20275-20282 (1997).

"I FUNCTION: Major connective tissue mitcoatractant secreted by differentiation of chondrocytes (By similarity). Mediates heparin-
and divalent cation-dependent cell adhesion in many cell types including fibroblasts, myofibroblasts, endothelial and epithelial cells (By similarity).

"Subtraction of By similarity).

"Subtraction of By similarity).

"Subtraction of By similarity).

"Subtraction of By similarity).

"Subtraction of Contains I IGPBP domain.

"SIMILARITY: Contains I IGPBP domain.

"SIMILARITY: Contains I TSP type-1 domain.

"SIMILARITY: Contains I TSP type-1 domain.
                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS0118; CTCK_1; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS50032; TSP1; 1.
PROSITE; PS501208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
Cell adhesion; DNA synthesis; Extracellular matrix; Heparin-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TSP TYPE-1.
HEPARIN-BINDING (BY SIMILARITY).
CTCX.
CTCX.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
CONNECTIVE TISSUE GROWTH FACTOR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43.7%; Score 919; DB 1; Length 349
44.9%; Pred. No. 2.1e-64;
ive 62; Mismatches 102; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR006208; Cys knot.
InterPro; IPR006207; Cys knot. C.
InterPro; IPR000867; Insl_gro_fac_pr.
InterPro; IPR000867; Insl_gro_fac_pr.
InterPro; IPR001007; WWP.C.
Pfam; PF00209; Cys knot; 1.
Pfam; PF00209; IGFBP; 1.
Pfam; PF00009; tsp_l; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U83916; AAC48756.1; -.
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Best Local Similarity 44.9<sup>3</sup>
Matches 173; Conservative
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SMART; SM00121; IB; 1.
SMART; SM00209; TSP1; 1
SMART; SM00214; VWC; 1.
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287
292
349 AA;
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DISULFID
SEQUENCE
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Crochet J., Perbal B.,

Crochet J., Perbal B.,

"Proviral rearrangements and overexpression of a new cellular gene
(nov) in myeloblastosis-associated virus type 1-induced
nephroblastcmas ";

Mol. Cell. Biol. 12:10-21(1992)

L. FUNCTION: IMMEDIATE-EARLY PROTEIN LIKELY TO PLAY A ROLE IN CELL
GROWTH REGULATION. ITS OVEREXPRESSION IS ASSOCIATED WITH
CON TOW GENE IN CHICKENE EMBRYONIC PIERCEMANL-TRUNCATED VERSION
CO NOW GENE IN CHICKEN SECRETCH, AND AT A LOWER LEVEL IN
MUSCLE AND INTESTINE, IN THE EMBRYO. LUNG AND LESS SO IN BRAIN AND
CO SPLEEN IN ADULT CHICKEN.
CO NOW GENE WHOSE TRANSCRIPTION IS NORMALLY ARRESTED IN
CONDUCT YIDNEY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the FNBL outstation the Buropean Bloinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SIMILARITY: Belongs to the CCN family.
-!- SIMILARITY: Contains 1 IGFBP domain.
-!- SIMILARITY: Contains 1 VMFC domain.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                       01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
10-OCT-2003 (Rel. 42, Last annotation update)
NOV protein precursor (Nephroblastoma overexpressed gene protein).
NOV OR CCN3.
Gallus gallus (Chicken).
Bukaryota; Metazoa; Chordata; Craniata; Futeleostomi; Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
STRALIBEROWN LOGHORD;
MEDILINE=92107157; Pubmed=1309586;
Joliot V., Martinerie C., Dambrine G., Plassiart G., Brisac M.,
351 AA.
  STANDARD;
                                                                                                                                                                                                                                                    NCBI_TaxID=9031;
CHICK
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53 CKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES 112

1 MSATGLSPVRCAFVLL----LALCSRPASGQDCSGQCQCAAGKRRACPAGVSLVLDGCGC 1 MSSSTFRTLAVAVTLLHLTRLALSTCPAA-----CHCPL-EAPKCAPGVGLVRDGCGC

ò 셤 ò

56

48;

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between the Swiss Institute of Bioinformatics and the ENBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-aib.ch/announce/or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                         Weiskirchen R., Bister K.;
Submitted (AuG-1994) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: Immediate-early protein likely to play a role in cell
growth regulation (By similarity).

-!- SUBCELLUIANE LOCATION: Secreted (By similarity).

-!- SIMILARITY: Belongs to the CCN family.

-!- SIMILARITY: Contains 1 IGFBP domain.

-!- SIMILARITY: Contains 1 TSP type-1 domain.

-!- SIMILARITY: Contains 1 TSP type-1 domain.

-!- SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Coturnix coturnix japonica (Japanese quail).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
NOV protein precursor (Nephroblastoma overexpressed gene protein)
NOV OR CCN3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VWFC.
TSP TYPE-1.
CTCK.
BY SIMILARITY.
N-LINKED (GLCKAC. ..) (POTENTIAL).
W, 717D9F8533882E89 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 353;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      40.7%; Score 856; DB 1; Length 35
43.6%; Pred. No. 1.7e-59;
iive 47; Mismatches 108; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     r; Signal.
POTENTIAL.
NOV PROTEIN.
IGFBP.
                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U13063; AAA21128.1; ...
InterPro; IPR006209; Cys knot.
InterPro; IPR006207; Cys_knot.
InterPro; IPR000864; TSP1.
InterPro; IPR000864; TSP1.
InterPro; IPR000864; TSP1.
InterPro; IPR001007; VWF.C.
Pfam; PP00207; Cys_knot; 1.
Pfam; PP00209; IGFBP; 1.
Pfam; PP00309; VWP; 1.
SWART; SM00121; IS; 1.
SWART; SM00121; IS; 1.
SWART; SM00121; IS; 1.
SWART; SM00214; VWC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS01208; VWFC, 1; 1.
PROSITE; PS50184; VWFC_2; 1.
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38667 MW;
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Best Local Similarity 43.6%;
Matches 163; Conservative 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             353 AA;
                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                 NCBI_TaxID=93934;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proto-oncogene;
SIGNAL 1
CHAIN 27
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DISULFID
DISULFID
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SEQUENCE
                                                                                                                       Coturnix.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122 TCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCREWVCD-EDSI-----KDSLDDQ 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           128 TCRDGQIGCLPRCNLGLLLPGPDCPFPRKIEVPGECCEKWVCDPRDEVLLGGFANAAYRO 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DDLLGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWS 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188 EATLGIDVSD-----SSANCIEQTTEWS 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211 ACSKSCGMGFSTRVTURNQQCEMVKQTRLCMMRPCENEEPSD-KKGKKCIQTKKSMKAVR 269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          270 FEYKNCTSVQTYKPRYCGLCNDGRCCTPHNTKTIQVEFRCPQGKFLKKPMMLINTCVCHG 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62 EDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  236 QCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVR 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         296 FIYAGCSSVKKYRPKYCGSCVDGRCCIPLQIRIVKMRFRCEDGEMFSKNVMMIQSCKCNY 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 LAVAVTLIHLTRLA----LSTCPAAC--HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLN 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                               VWFC.
TSP TYPE-1.
CTCK.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 351;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
40.9%; Score 861; DB 1; Length 351
Best Local Similarity 44.5%; Pred. No. 6.9e-60;
Matches 165; Conservative 44; Mismatches 110; Indels
                                                                                                                                                                                                                                                                                                                         NOV PROTEIN.
                               PRT;
                                                                                                                                                                                                                                                                                                                                     IGFBP.
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351 AA;
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NOV_COTJA
ID NOV_COTJA
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TISSUESKIN,

X MEDLINE=2238827; PubMed=12477932;

KRDLINE=2238827; PubMed=12477932;

Klauenser R.D., Feingold E.A., Grouse L.H., Derge J.G.,

Klauenser R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeborg B., Buetow K.H., Scheefer C.F., Bahat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Rapleton M., Soares M.B., Bonaldo M.F., Casavant T.D., Scheetz T.E.,

Brownstein M.J. Usdin T.B., Toshlyuki S., Carninci P., Frange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Raha S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,

Nillalon D.K., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Nhitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210 EWSACSRSCGMGFSTRVTNRNQQCEMVKQTRLCMMRPCENEBPSD-KKGKKCIRTKKKSMK 268
                                                                                                       233 SWSQCSKSCGTGISTRVINDNPECRLVKETRICEVRPCGQPVYSSLKKGKKGSKTKKSPE 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCK 352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              269 AVRFEYKNCTSVQTYKPRYCGLCNDGRCCTPHNTKTIQVEFRCPQGKFLKKPMMLINTCV 328
                                                                                                                                                                                                    119 HQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCD-EDSI----KDSL 172
SLPVILLLLLLLLLRPSEVNGREAPCPRPCGGRCPAEPPRCAPGVPAVLDGCGCCLVCAR 67
                                                                   QLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCK
                                                                                                                                                                                                                                                                                                                                     173 DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTT
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187 YRQEATLGIDVSD----SSANCIEQTT
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MEDLINE=94336229; PubMed=7520150;
MEDLINE=94336229; PubMed=7520150;
MARTHINETIE C., Huff V., Joubert I., Badzioch M., Saunders G.F.,
Strong L.C., Perbal B.;
Structural analyais of the human nov proto-oncogene and expression in Wilms tumor.";
Oncogene 9:2729-2732(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOV HUMAN STANDARD; PRT; 357 AA.

NOV HUMAN STANDARD; PRT; 357 AA.

10.4721, 0968Y5;

10.4721-1996 (Rel. 33, Last sequence update)

10.0777-2003 (Rel. 42, Last annotation update)

10.0777-2003 (Rel. 42, Last annotation update)

10.0777-2003 (Rel. 42, Last annotation update)

NOV protein homolog)

NOV protein homolog).

NOV OR CCN3 OR NOVH OR IGFBP9.

Enderyotaen (Human).

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |: || | | | CHGNCPQSNNAFFQ 342
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SEQUENCE FROM N.A.
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NOV HUMAN
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Butchfield Y. S. M., Keryatnaki M., Schaige T. S. M., Schaid T. S. A. Schaid T. S. Schaid T. Schaid T. S. Schaid T. S. Schaid T. Schaid T. S. Schaid T. S. Schaid T. S
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SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
                                                                                                                                                                                                                                                                                                               POTENTIAL.
NOV PROTEIN HOMOLOG.
IGFBP.
                                                                                                 EMBL; AF171936; AAD49371.1; -.
InterPro; IPR006208; Cys Knot.
InterPro; IPR006208; Cys Knot.
InterPro; IPR006867; INSI_gro_fac_pr
InterPro; IPR000867; INSI_gro_fac_pr
InterPro; IPR000864; TSPI_
InterPro; IPR000864; TSPI_
InterPro; IPR001007; VWF C.
Pfam; PF00007; Cys_Knot; I.
Pfam; PF00099; tsp_1; I.
Pfam; PF00099; two; I.
                                                                                                                                                                                             Pfam; PF00093; vwc; 1.
SMART; SM00041; CT; 1.
SMART; SM00121; IB; 1.
SMART; SM00209; TSP1; 1.
SMART; SM00214; VWC; 1.
PROSITE; PS01185; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS010205; TSPF BINDING; 1.
PROSITE; PS010208; VWFC 1; 1.
PROSITE; PS01208; VWFC 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   38509 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 158; Conservat
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351 AA;
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DOMAIN
DISULFID
DISULFID
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                                                                                                                                                                 FQPSCKFQCTCRDGQIGCVPRCQLDVLLPEPNCPAPRKVBVPGECCEKWICGPDE-EDSL 181
                                                                                                                                                                                                                                     DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTT 232
                                                                                                                                                                                                                                                  GG---LTLAAYRPEATLGVEV----SDSSV-----NCIEQTT 211
                                                                                                                                                                                                                                                                                       XAIHLOFKNCTSLHTYKPRFCGVCSDGRCCTPHNTKTIQAEFQCSPGQIVKKPVMVIGTC 331
                                                                                                                                                     CKYCAKOLNEDCSKTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGES 112
                                                                                                                                                                                                                                                                             SWSQCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQ-PVYSSLKKGKKCSKTKKSP 291
                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MSSSTF----RTLAVAVTLLHLTRLALST--CPAAC--HCPLEAPKCAPGVGLVRDGCGC
                                                                                                                                                                                              FOPUCKHOCTCIDGAVGCIPLCPOELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi; Muridae, Murinae, Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     overexpressed
  BY SIMILARITY.

BY SIMILARITY.

N-LINKED (GLCNAC. . .) (POTENTIAL)

N-LINKED (GLCNAC. . .) (POTENTIAL)

N -> K (IN REF. 3).

035D5BF4576BD85B CRC64;
                                                                                            41;
                                                                       DB 1; Length 357;
                                                                       ; Score 839.5; DB 1; Length
; Pred. No. 3.3e-58;
52; Mismatches 116; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
NOV protein homolog precursor (NovH) (Nephroblastoma Nov OR CCN3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Interacts with FBLN1 (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -i- SUBCELLULAR LOCATION: Secreted.
-i- TISSUE SPECIFICITY: Ubiquitous.
-i- SIMILARITY: Belongs to the CCN family.
-i- SIMILARITY: Contains 1 IGFBP domain.
-i- SIMILARITY: Contains 1 WRC domain.
-i- SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                  351 AA
  295 333 BX
300 337 BX
97 97 N-
280 280 N-
97 97 N
357 AA; 39162 MW;
                                                                      39.9%;
                                                                                  Best Local Similarity 43.8
Matches 163; Conservative
                                                                                                                                                                                                                                                                                                                                                             KCNYNCPHPNEA 363
                                                                                                                                                                                                                                                                                                                                                                               332 TCHTNCPKNNEA 343
                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia, Eutheri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBUNIT:
  DISULFID
DISULFID
CARBOHYD
CARBOHYD
CONFLICT
SEQUENCE
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                                                                                                                                                                           64
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090ZQ5;
                                                                         Query Match
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its mose by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce.or send an email to license@isb-sib.ch).
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TSP TYPE-1.
CTCK.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
BY SIMILARITY.
N-LINKED (GLCNAC. . .) (POTENTIAL).
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DISULFID
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DISULFID
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REDURINE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

SEQUENCE STRAIN-C57BL/6J; TISSUE-Embryonic head, and Spinal cord;

MEDINE-25354683; PubMed=1246685;

RA MILLINE-25354683; PubMed=1246685;

RA MIRAID I., Osato N., Saito R., Suzuki H., Yamanaka I., Kiyosawa H., Rayagi K., Tomaru Y., Hasegawa Y., Nogami A., Schonbach C., Gojobori T., Baldarelli R., Balla D., Bulf C., Hume D.A., Quackenbush J., Radarelli R., Manapin A., Matsuda H., Batalov S., Beisel K.W., RA Balke J.A., Bradt D., Brusic V., Chothia C., Corbani L.B., Cousins S., Ra Balke J.A., Bradt D., Brusic V., Chothia C., Corbani L.B., Cousins S., Ranai A., Kawaji H., Kawaswa Y., Kedzierski R., King B.L., Kanai A., Kawaji H., Kawaswa Y., Kedzierski R.M., King B.L., Kanai A., Kawaji H., Kawaswa Y., Kedzierski R.M., King B.L., Kanaji H., Kawaji H., Marchioni L., McKenzie L., Miki H., Ramadott D.R., Malteris L., Marchioni L., McKenzie L., Miki H., Ramadott D.R., Malteris L., Marchioni L., McKenzie L., Miki H., Ramadott D.C., Reed D.J., Rang J.U., Qi D., Ramachandra S., Rarai R., Fornida K., Sandelin A., Schneider C., Sengle C.A., Secou M., Shimada K., Sandelin A., Schneider C., Sengle C.A., Yanagisawa M., Yang I., Sakaxi I., Sa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. TISSUE=Breast tumor;

MEDLINE=22388257; Pubmed=12477932;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Attauner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D., Altachul S.F., Zeeberg B., Buetcow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
                                                                                                                                                                                                                                                                 SECUENCE FROM N.A.
STRAIN-129/Sv, and ICR; TISSUB-Brain;
MEDLINE=9713153; PubMed=8975721;
Snaith M.R., Natarajan D., Taylor L.B., Choi C.P., Martinerie C.,
Sheith M.R., Schofield P.N., Boulter C.A.;
"Genomic structure and chiromosomal mapping of the mouse nov gene.";
Genomics 38:425-428(1996).
                                                  NOV MOUSE STANDARD; FRT; 354 AA.

644299; Q8CA67;

01-NOV-1997 (Rel. 35, Last sequence update)

10-OCT-2003 (Rel. 42, Last annotation update)

NOV proctein homolog precursor (NovH) (Nephroblastoma overexpressed over CCN3.
                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBL_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=CS7BL/6;

BRDLINES-86204003; PubMed=8622864;

Martinerie C., Chevalier G., Rauscher F.J. III, Perbal B.;

"Regulation of nov by WT1: a potential role for nov in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Oncogene 12:1479-1492 (1996).
                                                                                                                                                                        NOV OR CCN3.
Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nephrogenesis.";
                                   RESULT 14
NOV MOUSE
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RA Bistchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong D. B. Bistchenko L., Marusina K., Farmer A.A., Rubin G.M., Millahy S.C., Raber B.M., Roughalland D.M., Peters G.J., Amalay S.J., Malay S.J., Honge B.M., Malay S.J., Malay S.J., Honge B.M., Malay S.J., Honge B.M., Malay S.J., Honge B.M., Malay S.J., Honge B.M., Godeston B.J., Malay S.J., Honge B.M., Malay S.J., Malay
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us-09-495-448a-2.rsp

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or send an email to license@isb-sib.ch)
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                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 152; Conserv
                                                                                                                                                                                                                                                                                                                                              343 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P 358
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                                                                                                                                                                                                                  Growth factor;
SIGNAL
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                                                                                                                             68 SCSEMRPCDQSSGLYCDRSADPNNQTGICMV-PEGDNCVFDGVIYRNGERFEPNCQYFCT 126
                                                                                                                                                                   LDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKS 240
                                                                                                                                                                                                           DCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQCT 122
                                                                                                                                                          CIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVC--DEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                     CGTGISTRVTNDNPECRLVKETRICEVRPCGQ-PVYSSLKKGKKCSKTKKSPEPVRFTYA 299
                                                                                                                                                                                                                                                                            GCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPH 359
                                                                                                                                                                                                                                                                                      7 RTLAVAVTLLH-LTRLALS-TCPAAC--HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNE 62
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xenopus laevis (African clawed frog).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae;
N-LINKED (GLCNAC. .) (POTENTIAL)
R -> G (IN REF. 3; BAC30363).
08ECE8CFC67829DE CRC64;
                                                          38;
                                      Length 354;
                                     Query Match
39.3%; Score 827; DB 1; Length 35
Best Local Similarity 44.2%; Pred. No. 3.1e-57;
Matches 161; Conservative 51; Mismatches 114; Indels
                                                                                                                                                                                                                                                                                                                                                                                                      01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
10-0CT-2003 (Rel. 42, Last annotation update)
NOV protein homolog precursor (Xnov).
                                                                                                                                                                                                                                                                                                                                                                                      343 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE=96257227; PubMed=8666280;
Ying Z., King M.L.;
          6 6 F
354 AA; 38928 MW;
                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Xenopodinae; Xenopus.
NCBI_TaxID=8355;
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CONFLICT
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68 OPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQCTCIDGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128 VGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLD------DQDDL
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328 CTCK.
380 BY SIMILARITY.
310 BY SIMILARITY.
318 BY SIMILARITY.
322 BY SIMILARITY.
324 BY SIMILARITY.
325 N. LINKED (GLCKAC. ..) (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
NOV PROTEIN HOMOLOG.
IGFBP.
VWFC.
EMBL, U37063; AAB17096.1; -..
InterPro; IPR006209; Cy8 knot.
InterPro; IPR006207; Cy8 knot.
InterPro; IPR000864; Insl_gro_fac_pr.
InterPro; IPR000864; TSP1.
InterPro; IPR001007; VWF_C.
Pfam; PP00107; VWF_C.
Pfam; PP00109; LSP_1; 1.
Pfam; PP00109; LSP_1; 1.
Pfam; PP00109; LSP_1; 1.
Pfam; PR00109; LSP_1; 1.
SMART; SM01011; IB; 1.
SMART; SM01011; IB; 1.
SMART; SM01011; IB; 1.
SMART; SM01011; IB; 1.
SMART; SM01185; CTCK_1; PALSE_NGG.
PROSITE; PS01185; CTCK_2; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS01228; WRC_1; 1.
PROSITE; PS01208; WWPC_1; 1.
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us-09-495-448a-2.rspt

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Ogvvk3 drosophila
Ogwyk7 homo sapien
Ogude4 homo sapien
Ogdf21 scyliorhinu
Oglibg7 xenopus lae
Og8534 homo sapien
Og8535 caenorhabdi
Og734 pallus gall
Og0x43 gallus gall
Og0x43 gallus gall
Og0x44 gallus gall
Og0x44 gallus gall
Og1x44 gallus gall
Og1x44 gallus gall
Og1x44 gallus gall
Og1x1 homo sapien
Og7574 bos taurus
Og6x56 mus musculu
Og6x56 mus musculu
Og9tvq2 caenorhabdi
Og8715 mus musculu
Og8x05 mus musculu
Og8x05 mus musculu
Og8x15 mus musculu
Og8x16 mus musculu
Og8x176 mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
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SIGNIENCE FROM N.A.

SIGNIENCE FROM N.A.

DIOKI, H., YOREKUTE H., FUTUKAWA K., YAMAMOTO H.;

DIOKI, H., YOREKUTE H., FUTUKAWA K., YAMAMOTO H.;

SUDMITTED (JUN-1998) to the EMBL/GenBank/DDBJ databases.

REMEL, ABOISSAT; BAA7339.1; -..

ROJ; GO:0005576; C:extracellular; IEA.

GO; GO:0005520; F:insulin-like growth factor binding; IEA.

ROJ; GO:0005520; F:insulin-like growth; IEA.

RITHERPO; IPRO06207; Cys*knot.C.

RITHERPO; IPRO06207; Cys*knot.C.

RITHERPO; IPRO01007; VWP.C.

RITHERPO; IPRO01007; VWP.C.

REMIN PRO0109; GYS KNOC; 1.

REMIN PRO019; IGFEB; 1.

REMIN PRO019; IGFEB; 1.

REMIN PRO019; WWP.T.

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Last annotation update)
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Q8VEA6
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Q21281
Q9JLL0
Q8CG65
  Q9VVX3
Q8WYK7
Q9UDE4
Q9DF21
                                                                                Q91BG7
Q86XX4
Q8T3A6
Q9XWD6
Q90Z43
Q90XG4
                                                                                                                                                                                                                                                          Q90Z44
Q9NZV1
Q86AK7
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SMART; SM00121; IB; 1.
SMART; SM00209; TSP1; 1.
SMART; SM00214; VWC; 1.
PROSITE; PS01185; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS01222; IGF_BINDING; 1.
                                                                                                                                                                                                                                       035888
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                                                                                                                                            CYR61.
Rattus norvegicus (Rat).
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Q9WTM9
            Q9wtm9 rattus norv
Q98tx5 xenopus lae
Q9uid7 homo sapien
Q9tq8 gallus gall
Q9tq8 canopus lae
Q9765 aus scrofa
Q9558 homo sapien
Q9526 gallus gall
Q9520 rattus norv
Q86210 bos taurus
Q91204 rattus norv
Q91204 mus musculu
Q91040 homo sapien
Q91040 homo sapien
Q94040 drosophila
                                                                                                                                            April 22, 2004, 17:53:04; Search time 38.3987 Seconds (without alignments) 3114.206 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1 MSSSTFRTLAVAVTLLHLTR......PNEASFRLYSLFNDIHKFRD 379
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                            GenCore version 5.1.6
(c) 1993 - 2004 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                 1017041 seqs, 315518202 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                                                           - protein search, using sw model
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seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                              69 PCDHTKGLECNFGASSRAIKGICRAKSEGRPCEYNSKIYQNGESFQPNCKHQCTCLDGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9 LAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQ
                                                                                                                                                                                                                                                                                                                      69 PCDHIKGLECNFGASSIALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQCTCIDGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SSVKKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHPN
                                                                                                                                                                                                                                                                          10 LAIAL-LSGFIDLAVSSCPAVCQCPVEVPKCAPGVGLVLDGCGCCCKICAKQLNEDCSKTH
                                                                                                                                                                                                                                                                                                                                                                                              GCIPLCPORLSLPNLGCPNPRLVKVSGQCCREWVCDFDSIKDSLDDQDDL----LGLDAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EVELTRINELIAIGKGSSLKRLPVFGTEPRVLFNPLHAH----GOKCIVQTTSWSQCSKSC
                                                                                                                                                                                                                       19; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P SEQUENCE OF 1-107 FROM N.A.

TISSUB=Kidney;

A Anding B., Long Y.;

Toloning of a new gene down-regulated in the small-cell tumor embryonal-rhabdomyosarcoma (RMS).";

Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.

I Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.

R GO; GO:0005520; F:insulin-like growth factor binding; IEA.

R GO; GO:0005520; F:insulin-like growth factor binding; IEA.

R GO; GO:000520; Cye knot.

R InterPro; IPR006209; Cye knot.

R InterPro; IPR006809; INFL_TSPI.

R InterPro; IPR000887; INFL_TSPI.

R InterPro; IPR000897; VWF_C.
                                                                                                                                                                                       13; Length 375;
                                                                                                                                                                                    Query Match
77.2%; Score 1624.5; DB 13; Lengt
Best Local Similarity 77.5%; Pred. No. 2.1e-146;
Matches 293; Conservative 29; Mismatches 37; Indels
SWART; SM00121; IB; 1.
SWART; SM01209; TSP1; 1.
PROSITE; P801214; VWC; 1.
PROSITE; P801221; VWC; 1.
PROSITE; P801225; CTCK_1; 1.
PROSITE; P800222; IGF BINDING; 1.
PROSITE; P805029; TSPI; 1.
PROSITE; P805104; VWFC_2; 1.
SEQUENCE 375 AA; 41460 MW; 78075CA7B380304E CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
Last sequence update)
Last annotation update)
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EA-YPYYRLFNDIHKFRD 375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY_2000 (TrEMBLrel. 13,
01-MAY-2000 (TrEMBLrel. 13,
01-OCT-2003 (TrEMBLrel. 25,
CYR61 protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     187
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                                                                                                                                                                                                                                                                                                                                                                        CTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                     181 FDASEVELTRNNELIATGKGSSLKRLPVFGTEPRVLYNPLHAHGQKCIVQTTSWSQCSKS 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NEDCSKTOPCDHIKGLECNFGASSIALKGICRAQSEGRPCEYNSRIYONGESFOPNCKHO 120
                                                                                                                                                                                                                                                                                                                                                  CICIDGAVGCIPLCPQELSIPNIGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGTGISTRVINDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CSSVKKYRPKYCGSCVDGRCCTPLQTRTVKARFRCEDGEMFSKAVAMIQSCKCNYNCPHP 360
                                                                                                                                                                                                            9
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                                                                                                                                                                                                                              1 MSSSTIKTLAVAVTLIHITRLALSTCPASCHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                                                                                                                                                                                                                                                                    181 LDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHGOKCIVQTTSWSQCSKS
                                                                                                                                                                                                            1 MSSSTFRTLAVAVTLLHLTRLALSTCPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQL
                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ©98TX5;
01-UNN-2001 (TrEMBLrel. 17, Created)
01-UNN-2001 (TrEMBLrel. 17, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Secreted cysteine-rich protein cyrstei.
Xenopus laevis (African clawed frog).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                          ô
                                                                                                                                      98.7%; Score 2076; DB 11; Length 379; 98.2%; Pred. No. 2e-189; Live 4; Mismatches 3; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A Latinkic B.V., Benett B., Smith J.C.;
Latinkic B.V., Benett B., Smith J.C.;
Characterization of Xenopus cyfdl.";
Characterization of Xenopus cyfdl.";
Submitted (NOV-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF320592; AAK00947.1;
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005520; F:insulin-like growth factor binding; IEA.
R GO; GO:0001558; P:regulation of cell growth; IEA.
R InterPro; IPR006209; Cyg knot. C.
R InterPro; IPR000867; InsI_gro_fac_pr.
R InterPro; IPR000867; InsI_gro_fac_pr.
R InterPro; IPR00107; VWF_C.
R InterPro; IPR00107; VWF_C.
R Pfam; PF00007; Cyg knot; 1.
R Pfam; PF00009; tsp_l; 1.
R Pfam; PF000093; vwc; 1.
R Pfam; PF000093; vwc; 1.
                                                                       1 24 POTENTIAL.
25 379 CYR61.
379 AA, 41728 MW; D2ABAFD77B84762B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361 NEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361 NEASFRLYSLFNDIHKFRD 379
 PS50092; TSP1; 1.
PS01208; VWFC_1; 1.
PS50184; VWFC_2; 1.
                                                                                                                                      Query Match
Best Local Similarity 98.2
Matches 372; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
   PROSITE; E
PROSITE; E
PROSITE; E
Signal.
SignAL
                                                                                        CHAIN
SEQUENCE
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245 ISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCSSV 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        212 ISTRVTNDNAFCRLEKQSRLCMVRPCBADLEENIKKGKKCIRTPKISKPIKFELSGCTSV 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        305 KKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHPNEAS 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126 GAVGCIPLCPQELSIPNIGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLGLDASE 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66 KTOPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYONGESFOPNCKHOCTCID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               186 VELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGOKCIVQTTSWSQCSKSCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8 TLAVAVTLIHL-TRLALSTCPAACHCPL-EAPKCAPGVGLVRDGCGCCKVCAKQLNEDCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (Arican clawed frog).
Xenopus laevis (African clawed frog).
Bukaryota; Metazca; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoldea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIĞNAL 1 21 POTENTIAL.
CHAIN 22 344 CONNECTIVE TISSUE GROWTH FACTOR.
SEQUENCE 344 AA; 37499 MW; 69E639AF69BF1D00 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44.6%; Score 938; DB 13; Length 344;
45.7%; Pred. No. 5.2e-81;
tive 61; Mismatches 103; Indels 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ying Z., King M.L.;
Submitted (AUG-1997) to the EMBL/GenBank/DDBJ databases.
EMBL; U43524; AAB67639.1; -.
EMBL; U4323; AAB67638.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124 GAVGCVPLCSMDVRLPSPDCPYPRRVKLPGKCCEEWVCDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO:0005576; C:extracellular; IEA
                          Pfam; PF00007; Cya knot; 1.
Pfam; PF00007; Cya knot; 1.
Pfam; PF00093; tsp_1; 1.
Pfam; PF00093; vwc; 1.
SWART; SW00041; CT; 1.
SWART; SW00209; TSP1; 1.
SWART; SW00209; TSP1; 1.
SWART; SW00209; TSP1; 1.
PROSITE; PS01125; CTCK 1; 1.
PROSITE; PS00225; IGF BINDING; 1.
PROSITE; PS00225; IGF BINDING; 1.
PROSITE; PS00202; ISPP1; 1.
PROSITE; PS0108; VWFC 1; 1.
PROSITE; PS0108; VWFC 1; 1.
PROSITE; PS0108; VWFC 2; 1.
'; VWF_C.
knot; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 45.74
Matches 170; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 365 FRLY--SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ESLYYRKMYGDM 343
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NCBI_TaxID=8355;
   InterPro; IPR001007;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Signal.
SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 GCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFGASSTALKGICRAQSEGRPCEYNSRIYQ 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109 NGESFQPNCKHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSI 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        XDSLDDQDDL----LGLDASEVELTRNNELIAIGKGSSLKRLPVFGTEPRVLFNPLHAHG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OKCIVOTISMSQCSKSCGTGISTRVINDNPECRLVKETRICEVRPCGQPVYSSLKKGKKC 284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SKTKKSPEPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLOTRTVKMRFRCED----- 337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 skirkkspervkrivagcisvkkyrkrkycgscyngrecifolira-----cebavpirrw 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 GCGTHPNLCIHLGHTASPTSYKHHTKGLECNFGASSTALKGICRAOSEGRPCEYNSRIYO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   098TQ8;
01-UTW-2001 (TERMELE: 17, Created)
01-UTW-2001 (TERMELE: 25, Last annotation update)
01-OCT-2003 (TERMELE: 25, Last annotation update)
Connective tissue growth factor precursor (Connective tissue growth
factor/hypertrophic chondrocyte-specific protein 24).
Gallus gallus (Chicken).
Eukaryota; Metazoa, Chordata, Craniata, Vertebrata; Euteleostomi;
Archosqueia; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                            Length 334;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GEMFSKN----VMMIQSCKCNYNCPHPNEASFRLYSLFNDIHKFRD 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294 GDIFQERHDDPVL----KCNYNCPHANEAAFPFYRLFNDIHKFRD 334
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 69.2%; Score 1455; DB 4; Length 33°
Best Local Similarity 78.9%; Pred. No. 2.6e-130;
Matches 273; Conservative 13; Mismatches 32; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0005576; C:extracellular; IBA.
GO; GO:0005520; F:insulin-like growth factor binding; IBA.
GO; GO:000558; P:regulation of cell growth; IEA.
InterPro; IPR006208; Cys_knot.
InterPro; IPR006207; Cys_knot_C.
InterPro; IPR006207; Cys_knot_C.
InterPro; IPR0068087; Insl_gro_fac_pr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mukudai Y., Kubota S., Takigawa M.;
Submitred (DEC-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ208335; CAC34438.1;
EMBL; AF463517; AAL68834.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. Gygi D.; Submitted (JAN-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                             9188987A7352E948 CRC64;
                                                        Pram; Pro0000; tsp_1; 1.
Pram; Pro0000; tsp_1; 1.
SMART; SM00041; CT; 1.
SMART; SM00209; TSP1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS01225; TSP1; 1.
PROSITE; PS01209; TSP1; 1.
PROSITE; PS01209; WWFC 2; 1.
PROSITE; PS0184; WWFC 2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
      Pfam; PF00007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
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129 GCIPLCPQELSLPNLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLGLDASEVEL 188
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  171 TRVGPALAVYRQBETYGPDSSLMR--------ANCLVQTTEWSACSKTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           212 GMGISTRVINDNEMCRLEKQSRLCMVRPCEADLEENIKKGKKCIRTPKISKPVKFELSGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SSVKKYRPKYCGSCVDGRCCTPLQTRTVKWRFRCEDGEMFSKNVMMIQSCKCNYNCPHPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 LAVAVTILHLIRLALSTCPAACHCPLBAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69 PCDHTKGLECNFGASSTALKGIÇRAQSEGRPÇEYNSRIYQNGESFQPNÇKHQCTÇIDGAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189 TRNNELIAI-----GKGSSLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKSC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242 GTGISTRVTNDNPBCRLVKBTRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13; Length 347;
                   Tofentification of newt connective tissue growth factor as a retinnid regulation of newt connective tissue growth factor as a retinnid regulation in limb blastenal cells.";

Gene 222:119-124 (1938).

R Gene 222:119-124 (1938).

R GO; GO:0005556; C:extracellular; IEA.

GO; GO:0005526; C:extracellular; IEA.

R GO; GO:0005520; F:insulin-like growth factor binding; IEA.

R GO; GO:0005520; F:insulin-like growth; IEA.

R InterPro; IPR006209; Cyg-knot.

R InterPro; IPR000867; InsI_gro_fac_pr.

R InterPro; IPR000867; InsI_gro_fac_pr.

R InterPro; IPR000097; VWF_C.

R Pfam; PF00007; Cyg-knot, 1.

R Pfam; PF00009; tsp_1; 1.

R SMART; SM000041; CT; 1.
                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match

43.8%; Score 920.5; DB 13; Length
Best Local Similarity 45.1%; Pred. No. 2.4e-79;
Matches 169; Conservative 54; Mismatches 103; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS01185; CTCK_1; 1.
PROSITE; PS01225; CTCK_2; 1.
PROSITE; PS00222; TGF ENDING; 1.
PROSITE; PS50092; TSPI; 1.
PROSITE; PS510208; VWFC_2; 1.
PROSITE; PS51084; VWFC_2; 1.
SEQUENCE 347 AA; 38098 MW; 38782399F27672C1 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Connective tissue growth factor.
CTGF.
Sus scrofa (Pig).
MEDLINE=99033008; PubMed=9813273;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     362 EASFRLY--SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : : : : DIFESMYYRKWYGDM 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00121; IB; 1.
SMART; SM00209; TSP1;
SMART; SM00214; VWC; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
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097765
097765
AC 097765,
DT 01-MAY-1
DT 01-OCT-2
DE Connecti
   SO DE RESERVA DE RESE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLG--LDASEVELTRNNELIAIGKGSSL 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24 CNGECQCPNKVPVCDPGVRMVQDGCGCCKVCSKQLGELCTERDVCDPHKGLFCDFGSRVN 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26 CPAACHCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFGASST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 86 ALKGICRAQSEGRPCEYNSRIYQNGESFQPNCKHQCTCIDGAVGCIPLCPQELSLPNLGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        204 KRIPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKSCGTGISTRVTNDNPECRLVKETR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        290 HRTATLPVEFKCPDGEVMKKNMMFIKTCACHFNCPGDNDIFEAMYYRKMYGDM 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               324 LQTRIVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHPNEASFRLY--SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Notophthalmus viridescens (Eastern newt) (Triturus viridescens). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae; Notophthalmus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44.6%; Score 937; DB 13; Length 343;
46.7%; Pred. No. 6.4e-81;
ive 60; Mismatches 90; Indels 3
GO:0005520; F:insulin-like growth factor binding; IEA. GO:0001558; P:regulation of cell growth; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS01185; CTCK 1; 1.
PROSITE; PS01225; CTCK 2; 1.
PROSITE; PS01209; TSP1; 1.
PROSITE; PS01209; VMPC 2; 1.
SEQUENCE 343 AA; 37966 MW; 93F221C5DB565A81 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
1-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-0CT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             347 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60; Mismatches
                                                         InterPro; IPR006208; Cys_Knot.
InterPro; IPR006207; Cys_Knot.C.
InterPro; IPR000867; Insl_gro_fac.pr.
InterPro; IPR000084; TSP1.
InterPro; IPR001007; VWF.C.
Pfam; PF002107; Cys_Knot; 1.
Pfam; PF00209; IGFBP; 1.
Pfam; PF00099; tsp_1; 1.
Pfam; PF00099; twot; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
TISSUE=Forelimb blastema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 46.73
Matches 165, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     [2]
SEQUENCE FROM N.A.
TISSUE=Forelimb blastema;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gates P.B.;
Submitted (JAN-2000) to
                                                                                                                                                                                                                                                                                                                                SM00041; CT; 1.
SM00121; IB; 1.
SM00209; TSP1; 1
SM00214; VWC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8316;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         146
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9PT80
Q9PT80;
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211 301 271 361

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86 RYETGVCACKSVG--CEFNQVHYHNGOVPQPNPLFSCLCVSGAIGCTP----LFIPKLA 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262 TRICEVRPCGQPVYSSLK--KGKKCSKTKKSPEPVRFTYAGCSSVKKYRPKYCGSCVDGR 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86 ALK-GICRAQSEGRPCEYNSRIYONGESPOPNCKHOCTCIDGAVGCIPLCPOELSLPNLG 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26 CPAACHCPLBAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFGASST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHWPCXCPQQKPRCPPGVSLVRDGCGCCKICAKQPGEICNEADLCDPHKGLYCDYSVDRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKSCGTGISTRVTNDNPECRLVKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          168 SYKTMPAYRNLPIL------WKKKCLVQATKWTPCSRTCGMGISNRVTNENSNCEMRKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ---CPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLGLDASEVELTRNNELIAIGKGS
                                                                                                                                                                                                              TISSUE=Mammary gland;
van Golen K.L., Davies S., Wu Z.F., Wang Y.F., Bucana C.D., Root H.,
Chandraeekharappa S., Strawderman M., Ethier S.P., Merajver S.D.;
"A novel putative IGF-binding, tumor suppressor protein, LIBC, and
RhoC GTPase, are determinants of the inflammatory breast cancer
                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51;
                                                                                                                                                                                                                                                                                                                                                      EMEL, APT43679; ADD31517.1; --

R GO; GO:0005576; C:extracellular; IEA.

GO; GO:0005520; F:insulin-like growth factor binding; IEA.

GO; GO:0001558; P:regulation of cell growth; IEA.

R GO; GO:0001558; P:regulation of cell growth; IEA.

R InterPro; IPR006208; Cys_knot.

R InterPro; IPR006208; Cys_knot.

R InterPro; IPR000884; TSP1.

R Pfam; PF00209; IGPEP; 1.

R Pfam; PF00209; IGPEP; 1.

R SMART; SM00121; IE; 1.

R SMART; SM00121; IE; 1.

R SMART; SM00209; TSP1; 1.

R PROSITE; PS00222; IGF PINDING; 1.

R PROSITE; PS00222; IGF PINDING; 1.

R PROSITE; PS00222; IGF PINDING; 1.
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Lost in inflammatory breast cancer tumor suppressor protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           139 GSHCSGAK----GGKKBDQSNCSLEPLLQQL--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTPLQTRIVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHPNE 362
                                                                                                                                                                                                                                                                                                                        phenotype.";
Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCIPNKSKMITIQFDCPNEGSFKWKWLWITSCVCQRNCREPGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9PSS6 PRELIMINARY; PRT; 176 AA.
Q9PSS6;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-OCT-2000 (TrEMBLrel. 13, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Potential IGF binding protein (Fragments).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30.2%; Score 635.5; DB 4;
.larity 34.7%; Pred. No. 3.4e-52;
Conservative 57; Mismatches 116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 119; Conservat
                                                                                   Homo sapiens (Human)
                                                                                                                                                                                           SEQUENCE FROM N.A
                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                113 FOPNCKHOCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSGQCCBEWVCDEDSIXDSL 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         204 TEWSACSKTCGMGISTRVTNDNASCRIEKQSRLCMVRPCEADLEENIKKGKKCIRTPKIS 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               173 DDQDDLLGLDASEVELTRNNELIAIGKGSSLKRL-PVFGTEPRVLFNPLHAHGQKCIVQT 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               232 TSWSQCSKSCGTGISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSP 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EPVRFTYAGCSSVKKYRPKYCGSCVDGRCCTPLQTRTVKWRFRCEDGEMFSKNVMMIQSC 351
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                                                                                                          TISSUE-Uterus;
Harding P.A., Brigstock D.R.;
Harding and sequencing of a porcine connective tissue growth factor (CTGF) cDNA.";
CLOSID CDNA.";
Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases.
    Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Cetartiodactyla, Suina, Suidae, Sus.
                                                                                                                                                                                                  EMBL; UT0060; AAD0174 1: -

BO; GO: 0005576; C:extracellular; IEA.

GO; GO: 0005576; C:extracellular; IEA.

GO; GO: 0005576; C:extracellular; IEA.

GO; GO: 0005576; C:extracellular; IEA.

R GO; GO: 00055820; F:insulin-like growth factor binding; IEA.

R GO; GO: 000558; P:regulation of cell growth; IEA.

R InterPro; IPR006209; Cyg knot.

R InterPro; IPR00684; TSP1.

R InterPro; IPR00084; TSP1.

R InterPro; IPR00107; WWF.C.

Pfam; PF00007; Cyg knot.

R Pfam; PF00009; tsp1; 1.

R Pfam; PF00009; tsp1; 1.

R Pfam; PF00099; tsp1; 1.

R SMART; SM00219; IGFE; 1.

R SMART; SM00214; WWC; 1.

R SMART; SM00214; WWC; 1.

R PROSITE; PS01225; CTCKZ; 1.

R PROSITE; PS01225; TCKZ; 1.

R PROSITE; PS01208; WFC_1; 1.

R PROSITE; PS01208; WFC_2; 1.

R PROSITE; PS01208; WFC_2; 1.

R PROSITE; PS01208; WFC_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 349;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
42.4%; Score 891; DB 6; Length 34
Best Local Similarity 43.4%; Pred. No. 1.6e-76;
Matches 167; Conservative 65; Mismatches 105; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        352 KCNYNCPHPNEASFRLY--SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-1999 (TrEMBLrel. 10, Created
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                                                                                      SEQUENCE FROM N.A.
                                        NCBI_TaxID=9823;
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095958;
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121 YGDM 124
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68 PEDGGGAGIC----EGDNCVFDGMIYRNGETFQPSCKYQCTCRDGQIGCLPRCNLGLLLP 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     142 NLGCPNPRLVKVSGQCCEEWVCDEDSIKDSLDDQDDLLGLDASEVELTRNNELIAIGKGS 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8 AACPRPCGGRCPAEPPRCAPGVPAVIDGCGCCLVCARQRGESCSPLLPCDESGGLYCDRG 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
Jia J.D., Sedlaczek N., Bauer M., Wiecher D., Boigk G., Cho J.J.,
Jia J.D., Sedlaczek N., Bauer M., Wiecher D., Boigk G., Cho J.J.,
Ruchl M., Riscken E.O., Schuppan D.;
"Connective tissue growth factor is produced by hepatic stellate cells
and upregulated in rat liver fibrosis.";
Submitted (FEB-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AJ236872; CAB41996.1;
InterPro; IPR00084; ISB1.
InterPro; IPR001007; VWP_C.
Pfam; PF00090; tsp_1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124 GPDCPFPRKIEVPGECCEKWVC-----DPRDEVL-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                       24 STCPAAC - HCPLEAPKCAPGVGLVRDGCGCCKVCAKQLNEDCSKTQPCDHTKGLECNFG
Gallus gallus (Chicken).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Archosauria, Aves, Neognathae, Galliformes, Phasianidae, Phasianinae,
                                                                                         MEDLINE=92096871;
Martinerie C., Perbal B.;
C. R. Acad. Sci., III, Sci. Vie 313:345-351 (1991).
GO, GO:0005576; C:extracellular; IEA.
GO, GO:0005520; F:insulin-like growth factor binding; IEA.
GO; GO:0005520; F:insulin-like growth factor binding; IEA.
GO; GO:000558; P:regulation of cell growth; IEA.
InterPro; IPR000867; Insl gro_fac_pr.
InterPro; IPR01007; VWP_C.
SMART; SM00121; IB; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            202 SLKRLPVFGTEPRVLFNPLHAHGQKCIVQTTSWSQCSKSCGTGISTRVTNDN 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 13; Length 176;
                                                                                                                                                                                                                                                                                                                                                                                                Query Match
23.6%; Score 495.5; DB 13; Length
Best Local Similarity 41.4%; Pred. No. 3.6e-39;
Matches 96; Conservative 20; Mismatches 51; Indels
                                                                                                                                                                                                                                                                                                                                                                     18656 MW; 4FA69FFDB79B1C67 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09R2C0;
01-MXY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNA-2003 (TrEMBLrel. 24, Last annotation update)
Connective tissue growth factor (Fragment).
                                                                                                                                                                                                                                                               PROSITE; PS00222; IGF BINDING; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                     176 AA;
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                                                     NCBI_TaxID=9031;
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96 EGRPCEYNSRIYONGESFOPNCKHOCTCIDGAVGCIPLCPOELSLPNLGCPNPRLVKVSG 155
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WEDLINE=22544002; PubMed=12658628;

A failwath H., Rateuma S., Kizaki K., Patel O.V., Nakano H.,

Takahashi T., Imai K., Hirasawa A., Shiojima S., Ikawa H., Suzuki Y.,

Takahashi T., Imai K., Hirasawa A., Shiojima S., Ikawa H., Suzuki Y.,

Takahashi T., Imai K., Hirasawa A., Shiojima S., Ikawa H., Suzuki Y.,

Takahashi T., Imai K., Hodoroki J., Hashizume K.;

Tobarcerization of gene expression profiles in early bovine pregnancy using a custom cDMA microarray.";

Mol. Reprod. Dev. 65:9-18(2003).

Reprod. BACSG397 1; -

Reprod. BACSG397 1; -

Reprod. PRO0007; Cys knot.

Reprod. PRO0007; Cys k
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313 GSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSCKCNYNCPHPNEASFRLY--SL 370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      * DGAPCVFGGSVYRSGESFQSSCKYQCTCLDGAVGCVPLCSMDVRLPSPDCPPPRVKLPG 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
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Q1-UTNY-2003 (TrEMBLrel. 24, Created)
01-UTNY-2003 (TrEMBLrel. 25, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Similar to connective tissue growth factor precursor (Fragment).
Similar to connective tissue growth factor precursor (Fragment).
Bost caurus (Bovine).
Bost caurus, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33;
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
17.8%; Score 374.5; DB 11; Length 128;
Best Local Similarity 43.3%; Pred. No. 8.5e-28;
Matches 68; Conservative 22; Mismatches 34; Indels 33;
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                                                                                                                                                                                                                                                                128 128 AA; 13803 MW; P30142D0C491B7C7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215 VLFNPLHAHGOKCIVQTTSWSQCSKSCGTGISTRVTN 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MM-----RANCLVQTTBWSACSKTCGMGISTRVTN 128
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46.8%; Pred. No. 1.2e-25;
iive 28; Mismatches 36;
Pfam; PF00093; vwc; 1.
SMART; SM00214; VWC; 1.
PROSITE; PS01208; VWFC_1; 1.
PROSITE; PS50184; VWFC_2; 1.
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nes 58; Conserv
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RESULT 12 Q9Z164

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260 KETRICEVRPCGOPVYSSLKKGKKCSKTKKSPEPVRFTYAGCSSVKKYRPKYCGSCVDGR 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu Y., Kitano T., Koide T., Shirolshi T., Moriwaki K., Saitou N.;
Liu Y., Kitano T., Koide T., Shirolshi T., Moriwaki K., Saitou N.;
P'Compgicuous Differences among Gene Genealogies of 21 Nuclear Genes of
Submitted (FEB-200) to the EMBL/GenBank/DDBJ databases.

EMBL, AB039103, BAB66827.1;
InterPro; IPR006207; Cys_Knot_C.
InterPro; IPR006207; Cys_Knot_C.
InterPro; IPR00041; Cys_Knot, 1.
PROSITE; P801185; CTCK_1; 1.
PROSITE; P801185; CTCK_2; 1.
NON TER

SEQÜENCE 119 AA; 13626 MW; C7C8AD253DF331CE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62 CCTPHRTTTLPVEFKCPDGEIMKKNMMFIKTCACHYNCPGDNDIFESLYYRKYYGDM 118
                  Liu Y., Kitano T., Koide T., Shiroishi T., Moriwaki K., Saitou N.; "Conspicuous Differences among Gene Genealogies of 21 Nuclear Genes of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     320 CCTPLQTRTVKMRFRCEDGEMPSKNVMMIQSCKCNYNCPHPNEASFRLY--SLFNDI 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260 KETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCSSVKKYRPKYCGSCVDGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 KOSRLCMVRPCEADLEENIKKGKKCIRTPKIAKPVKFELSGCTSVKTYRAKFCGVCTDGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus spicilegus (Steppe mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .;
7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16.3%; Score 343; DB 11; Length 119; 48.7%; Pred. No. 7.9e-25; ive 25; Mismatches 33; Indele 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            16.3%; Score 343; DB 11; Length 148.7%; Pred. No. 7.9e-25; ive 25; Mismatches 33; Indels
                                                                            (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                PERM, PP00007; Cys knot; 1. PROSITE; PS01185; CTCK 1; 1. PROSITE; PS01225; CTCK 2; 1. 1. 1. SEQÜENCE 119 AA; 13626 MW; C7C8AD253DF331CE CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                          EMBL; AB039100; BAB68624.1; -.
EMBL; AB039101; BAB68625.1; -.
EMBL; AB039102; BAB68626.1; -.
InterPro; IPR006208; Cys_knot_C.
InterPro; IPR006209; Cys_knot_C.
Pfam; PP00007; Cys_knot_C.
                                                                                                                                         AB039096; BAB68620.1; -. AB039097; BAB68621.1; -. AB039098; BAB68622.1; -. AB039099; BAB68623.1; -.
                                                                                                   EMBL; AB039094; BAB68618.1; -. EMBL; AB039095; BAB68619.1; -.
                                                            Five Mus musculus subspecies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FISP-12 protein (Fragment). FISP-12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         57; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
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Best Local
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Matches S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     245 ISTRVTNDNPECRLVKETRICEVRPCGQPVYSSLKKGKKCSKTKKSPEPVRFTYAGCSSV 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Various strains;
Liu Y., Kitano T., Koide T., Shiroishi T., Moriwaki K., Saitou N.;
"Conspicuous Differences among Gene Genealogies of 21 Nuclear Genes of
                                                                                                                                                                                                                                                                                                                                                                                          "Suppression subtractive hybridization identifies high glucose levels as a stimulus for expression of connective tissue growth factor and other genes in human mesangial cells.";

J. Biol. Chem. 274:5830-5834(1999).

EMBL; AF079531; AAD02838.1;
InterPro; IPR006208; Cya. Knot.
InterPro; IPR006207; Cys. Knot.
Pfam; PF00007; Cys. Knot. 1.
                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                              SECUENCE FROM N.A.
MEDLINE=99150373; PubMed=10026205;
Murphy M., Godson C., Cannon S., Kato S., Mackenzie H.S., Martin F.,
Brady H.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Buteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 16.4%; Score 345; DB 11; Length 113; Best Local Similarity 55.1%; Pred. No. 4.8e-25; Matches 59; Conservative 20; Mismatches 28; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KTYRAKFCGVCTDGRCCTPHRTTTLPVSFKCPHGEIMKKNMMFIKTC 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         305 KKYRPKYCGSCVDGRCCTPLQTRTVKMRFRCEDGEMFSKNVMMIQSC 351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-pgn2;
Kobayakawa H., Saitou N.;
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Five Mus musculus subspecies.";
Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113 AA; 12767 MW; 23EA69FC0A60635E CRC64;
                                                                                                            01-MAY-1999 (TrEWBLrel. 10, Created)
01-MAY-1999 (TrEWBLrel. 10, Last sequence update)
01-MAR-2003 (TrEWBLrel. 23, Last annotation update)
Connective tissue growth factor (Fragment).
Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         119 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
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01-DEC-2001 (TrEMBLrel. 19, Cr
01-DEC-2001 (TrEMBLrel. 19, La
01-MAR-2003 (TrEMBLrel. 23, Le
FISP-12 protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS01225; CTCK_2; 1.
                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                   NCBI_TaxID=10116;
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319 61

RESULT 13
091V29
1D 091V29
DT 01-DE
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96 EGRPCEYNSRIYQNGESFQPNCKHQCTCIDGAVGCIPLCPQELSLPNLGCPNPRLVKVSG 155
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 DGAPCIFGGTVYRSGESFQSSCKYQCTCLDGAVGCMPLCSMDVRLPSDDCPFPRRVKLPG 60
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320 CCTPLOTRIVIARFRCEDGEMFSKAVVMMIQSCKCNYNCPHPNEASFRLY -- SLFNDI 374
                                                             62 CCTPHRITTLPVEFKCPDGEIMKKNAMFIKTCACHYNCPGDNDIFESLYYRRAYGDM 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2000 (TrEMBLrel. 24, Last annotation update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Potential IGF binding protein (Fragments).
Edwo sepicens (Human).
Eukaryota; Meteara; Chordata; Craniata; Verrebrata; Euteleostomi; Mammalia; Eutheraia; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
16.2%; Score 341; DB 4; Length 100;
Best Local Similarity 40.5%; Pred. No. 1e-24;
Matches 64; Conservative 15; Mismatches 21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100 100
100 AA; 10813 MW; C64EE2B9AD8A3299 CRC64;
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                                                                                                                                                                                                                                                                                                                                            PRT; 100 AA
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                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
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SEQUENCE
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Q9UDL6
AC Q9UDL DT 01-MA DT 00-MA DT 01-MA DT 00-MA DT 01-MA DT 0
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